REPORT

ON THE

SANITARY CONDITION

OF THE

BOROUGH OF CAMBRIDGE,

From January 1st to December 31st, 1909,

BY

ANDREW J. LAIRD, M.D., D.P.H.,

MEDICAL OFFICER OF HEALTH.

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BOROUGH OF CAMBRIDGE,
HEALTH DEPARTMENT,
GUILDHALL,
April 16th, 1910.

To the Chairman and Members of the Health Committee.

Gentlemen,

I have the honour to present to you my Annual Report on the Health of the Borough for the year 1909.

It is satisfactory to note that the general death-rate is below the average of the past ten years. This is due to the reduction of deaths at all ages under 25 years. The mortality of infants has fallen 29 per cent., and the mortality of children between one and five years of age 54·6 per cent. below the average of the past ten years.

The great fall in the death-rate from epidemic diseases has resulted from the freedom from such diseases as Measles and Whooping Cough.

The birth-rate is the highest recorded since 1905.

During the year attention has been specially directed to the questions of Housing, Prevention of Consumption, and Private Slaughterhouses.

With regard to fresh legislation special interest attaches to the fact that the Notification of Births Act has been in force during the last six months of the year, and is working satisfactorily and with perfect smoothness. The increased powers conferred by the Housing and Town Planning Act, 1909, should, in view of the importance of the subject in Cambridge at the present time, prove of the utmost value and will no doubt have a most beneficial effect.

Application has been made to the Local Government Board for authority to adopt the Public Health Acts (Amendment) Act, 1907, but so far this has not been obtained.

Statistics relating to such subjects as Still-births, Vaccination, Housing, and Pauperism have for the first time been introduced, and should prove of increasing interest and value as they are added to from year to year.

I am, Gentlemen,
Your obedient Servant,
ANDREW J. LAIRD.

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Part i.

Statistical.

STATISTICAL SUMMARY FOR 1909.

	1908.	1909.
Area of Borough in Acres		3210
Population at Census, 1901		38379
Estimated Population to middle of 1909		40313
Average number of persons per Acre	12·5	12·5
Number of persons per house (1901)	4·4	4·4
Birth-rate per 1000 living	19·7	21·1
Death-rate per 1000 living	14·9	13·4
Death-rate from Epidemic Diseases	1·99	0·59
Deaths under 1 year of Age to 1000 Registered Births	135	83
Death-rate from Phthisis	1·09	0·81
Death-rate from other Tubercular Diseases	0·49	0·37
Death-rate from Respiratory Diseases	2·01	1·86
Death-rate from Cancer	1·32	1·33

ADOPTIVE ACTS IN FORCE IN CAMBRIDGE.

Infectious Disease (Prevention) Act, 1890, adopted 31st January, 1891.

Public Health Acts Amendment Act, 1890 (Pt. III), adopted 1st January, 1893.

Notification of Births Act, 1907, adopted July 1st, 1909.

REPORT.

Population.

The estimated population at the middle of 1909 is 40,313, the population of the two registration sub-districts being :—

St. Andrew-the-Less	30,916.
St. Andrew-the-Great	9,397.

Area and Density of Population.

The area of the Borough, excluding any area covered by water, is 3,210 acres. This gives a density of 12·5 persons per acre. Excluding 315 acres of public common and open spaces, the number of persons per acre is 13·9.

Marriages and Marriage Rate.

The number of marriages during the year was 323, equal to a rate of 16·0 per 1000 of the population. The rate for England and Wales in 1909 was 14·5 per 1000.

Births and Birth-rate.

The total number of births registered was 854 (426 males and 428 females). The birth-rate per 1000 of the estimated population is 21·1, which is 1·4 higher than the rate recorded for the year 1908, and is the highest rate recorded since the year 1905.

The mean rate for the previous ten years is 21·4.

The birth-rate for England and Wales in 1909 was 25·6, which is 0·9 per 1000 below the rate for 1908, and is lower than the rate in any other year on record.

Of the births registered 49, or 5·7 per cent., were illegitimate, as compared with 35, or 4·4 per cent., in 1908.

Deaths and Death-rate.

The total number of deaths registered during 1909 was 597, equal to an *uncorrected* death-rate of 14·8 per 1000 of the population. Correction must be made for 19 deaths of persons belonging to the Borough which occurred in Public Institutions outside the district, viz.: 18 in the County Asylum at Fulbourn, and 1 in H.M. Prison, Chesterton. These must be added, while 68 deaths of persons not belonging to the district must be subtracted. Sixty-seven of these occurred in Addenbrooke's Hospital, and one in the Infectious Diseases Hospital. The corrected number is therefore 548*, of which 256 were

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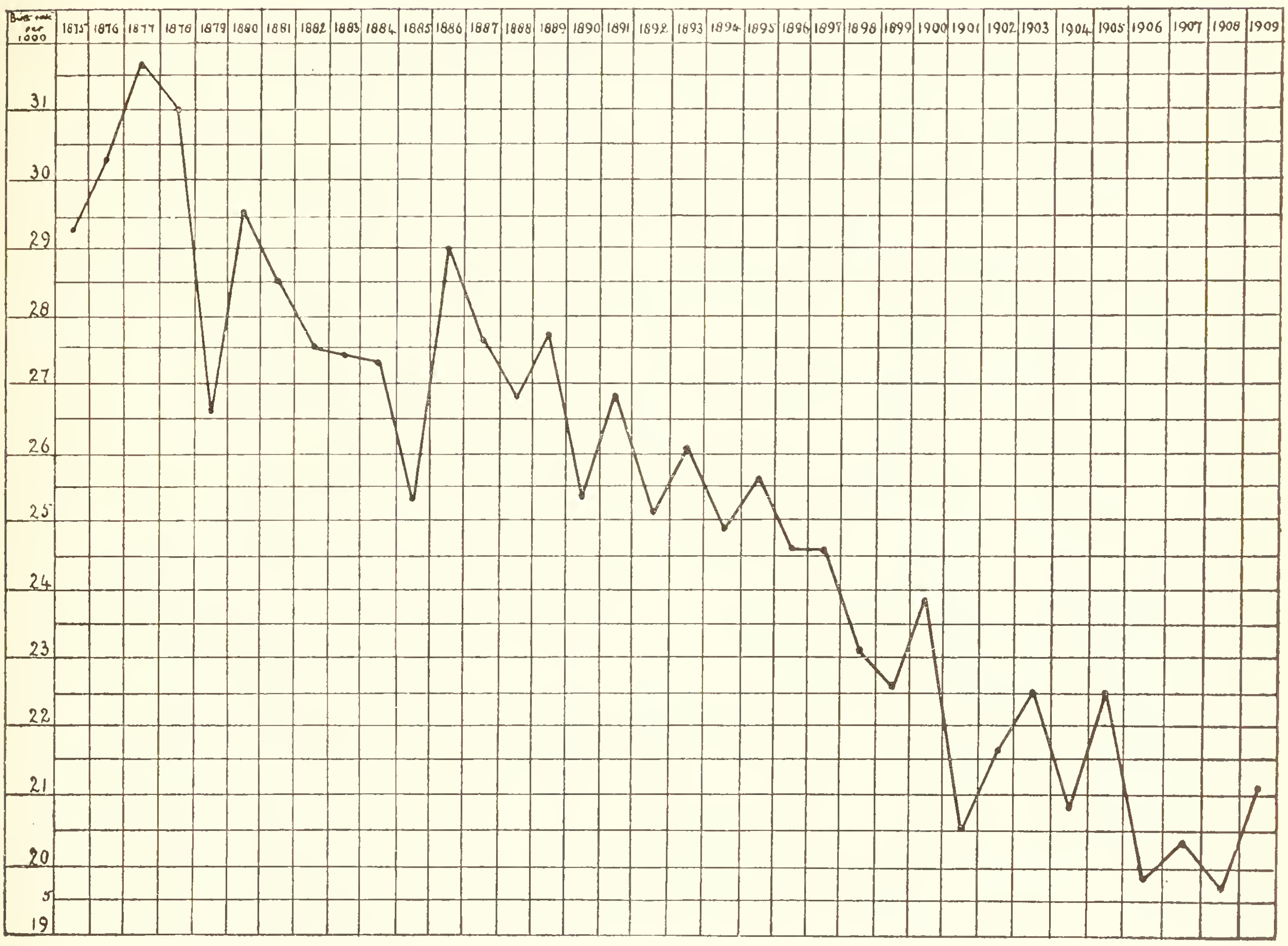
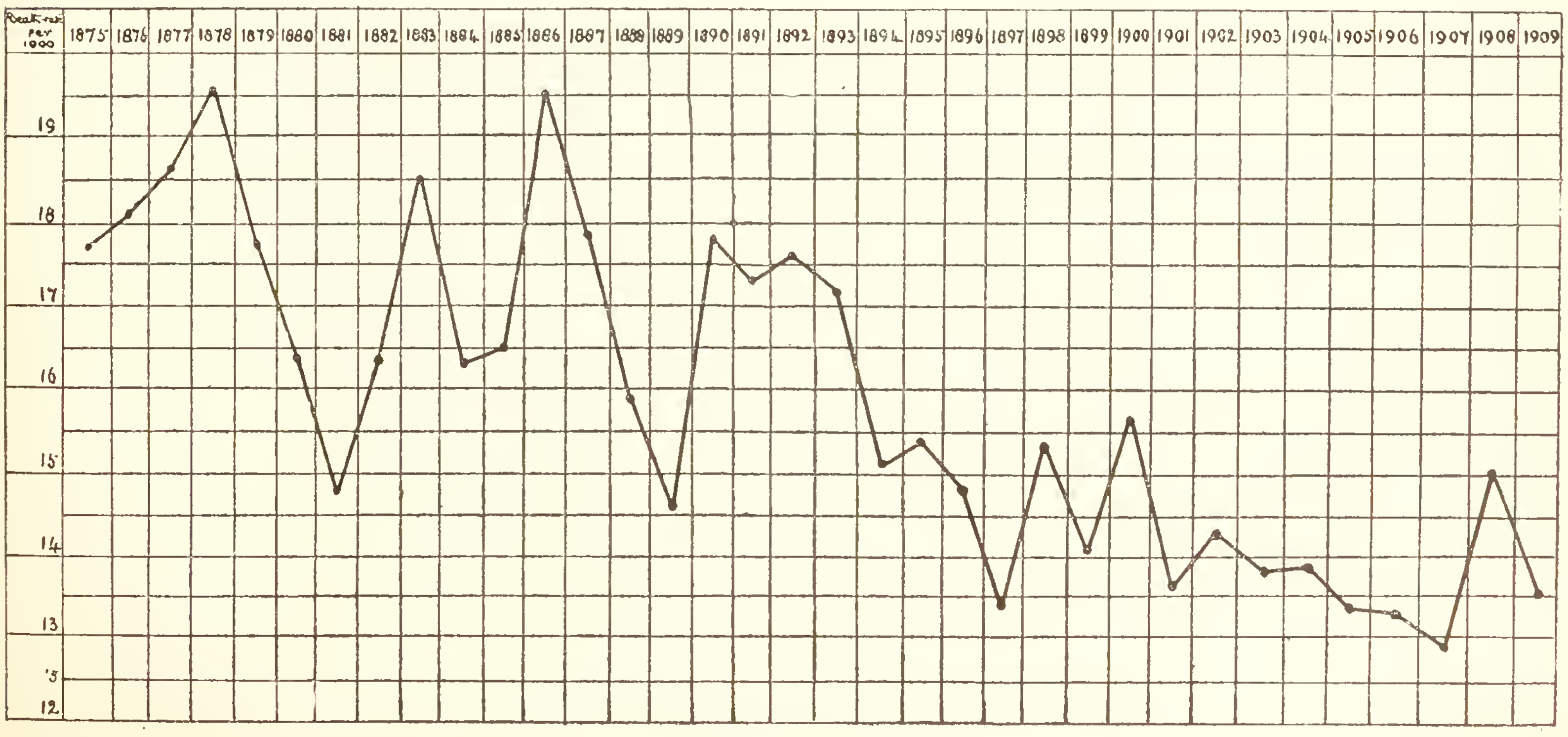
* This number includes one death in St. Andrew-the-Less Sub-District, and four deaths in the St. Andrew-the-Great Sub-District, of persons not belonging to the district, but as they did not die in a Public Institution in the district they have to be, by direction of the Local Government Board, included in the total number of deaths. If the above corrections were made the crude death-rate would be 13·4, and the corrected death-rate 13·3.

Charts showing the Birth-rate and Death-rate of Cambridge for each year since 1875.

BIRTH-RATE.



DEATH-RATE.



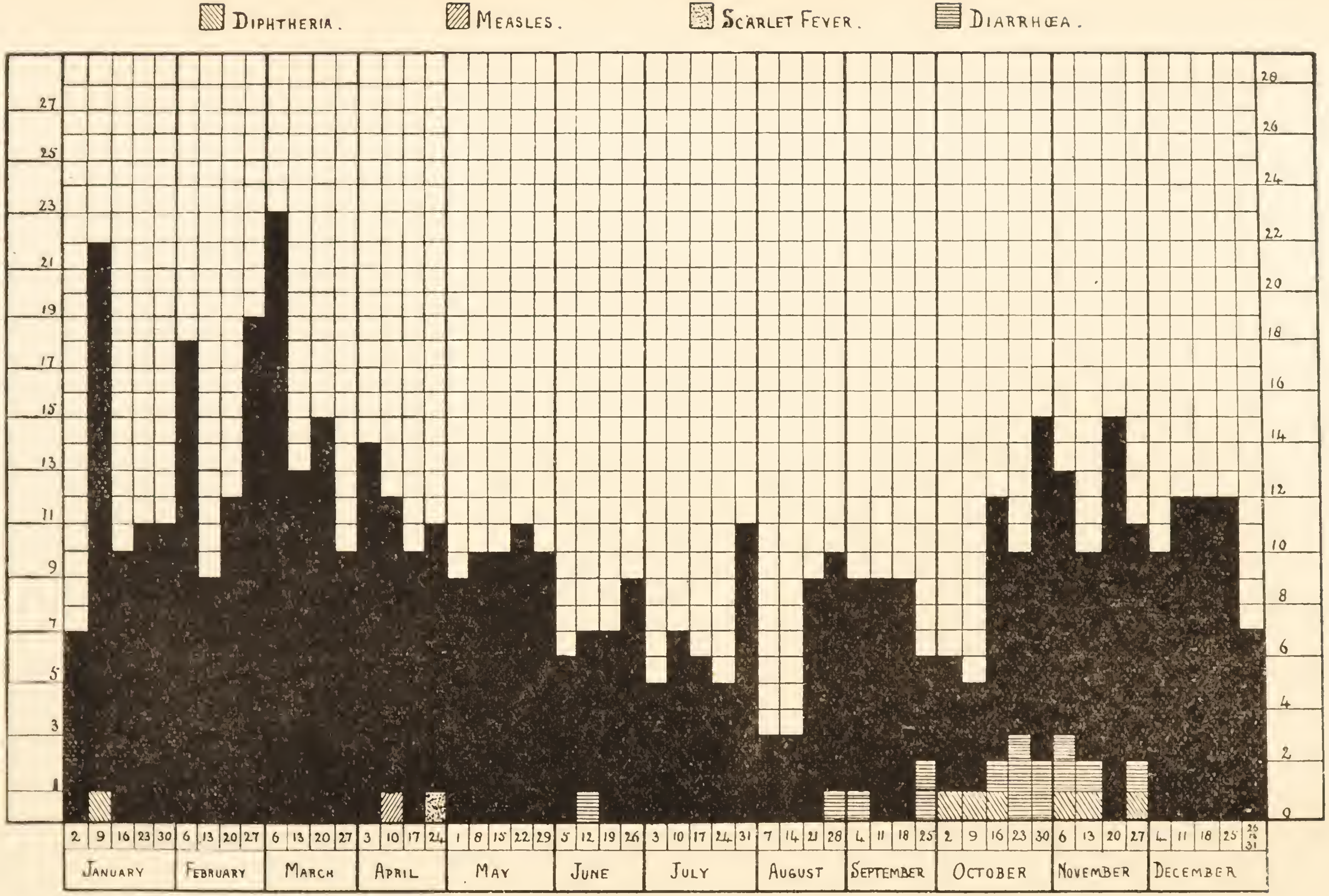


Chart showing the number of Deaths from All Causes during each week in 1909, distinguishing Deaths from Epidemic Diseases.

males and 292 were females. This is 55 less than the corrected number of deaths for 1908. The *crude* death-rate is therefore 13·5, which is 1·5 per 1000 lower than the rate recorded for the year 1908.

By applying the factor of correction (·994), by means of which the rate is made strictly comparable with that of England and Wales, the *corrected* death-rate is found to be 13·4 per 1000.

The mean rate for the previous ten years is 14·0.

The death-rate for England and Wales for the year 1909 is given as 14·5 per 1000, which is 0·2 per 1000 below the rate in 1908, and lower than the rate in any year on record.

The Charts on page 9 show the birth-rate and death-rate for each year from 1875 to 1909.

Principal Causes of Death.

The relative importance of the various causes of death is shown by the following figures :—

CAUSE OF DEATH.	1900	1901	1902	1903	1904	1905	1906	1907	1908	Average.	1909
Diseases of Respiratory Organs (excluding Consumption) ...	125	86	98	84	80	74	87	80	81	88	75
Tubercular Diseases (including Consumption)	62	68	62	63	56	50	47	57	64	58	48
Diseases of the Heart ...	64	53	58	47	55	45	40	53	53	52	53
Malignant Diseases (Cancer, &c.)	44	33	23	34	44	46	34	46	53	40	54
Diarrhœa and Enteritis..	39	35	14	19	30	20	44	13	17	25	16
Premature Birth ...	14	20	11	14	17	13	10	13	22	15	22
Measles	1	2	44	—	12	9	1	—	33	11	1
Whooping Cough ..	21	—	5	7	—	—	16	—	32	9	—
All other causes ...	238	230	242	273	256	274	251	255	248	252	279

Mortality in relation to Age.

The number of deaths at different periods of life is shown in the following table :—

AGE GROUP.	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	Average 10 years.	1909
Under 1 year ...	118	122	101	114	96	107	70	101	72	107	100	71
1 and under 5 ...	30	52	32	57	42	31	37	53	23	84	44	20
5 and under 15..	9	14	12	19	23	25	24	22	16	22	19	18
15 and under 25	22	27	23	25	24	28	22	21	17	32	24	23
25 and under 65	175	189	198	163	169	154	184	163	188	169	175	176
65 and upwards	190	204	161	179	187	205	194	170	201	189	188	240
All Ages ..	544	608	527	557	541	550	531	530	517	603	550	548

Mortality in Relation to Season.

The number of deaths occurring in each quarter of the year during the past ten years is shown in the following table:—

Year.	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Total for Year.
1899 ...	137	134	144	130	545
1900 ...	251	126	111	120	608
1901 ...	153	114	128	132	527
1902 ...	166	152	107	132	557
1903 ...	175	132	120	114	541
1904 ...	169	108	125	148	550
1905 ...	198	120	91	122	531
1906 ...	171	113	124	122	530
1907 ...	164	120	113	120	517
1908 ...	199	158	117	129	603
Mean for 10 years	178	127	118	127	550
1909 ...	183	124	92	149	548

The number of deaths in each week throughout the year is shown on the Chart on page 10.

Epidemic Mortality.

The deaths belonging to the chief epidemic diseases include 7 from Diphtheria, 1 from Scarlet Fever, 15 from Diarrhœa (5 under one year of age), and 1 from Measles, total 24, equal to a death-rate from these diseases of 0·59 per 1000 of the population per annum, which is a lower rate by 1·40 than in the year 1908.

The mean rate for the previous ten years is 1·29.

The death-rate from these diseases in England and Wales for the year 1909 is given as 1·12.

Infantile Mortality.

The number of deaths registered of children under one year of age belonging to the Borough was 71, as compared with 107 in 1908.

The Infant mortality rate or the proportion of such deaths to 1000 births was 83. The rate for 1908 was 135, and the mean rate for the previous ten years was 125.

The Infantile mortality rate for England and Wales is given as 109, which is 11 per 1000 below the rate in 1908. The rate in 1909 was lower than in any other year on record.

The causes of the Infantile mortality are set out fully in Table V. at the end of the report, while the relative importance of the various contributory causes for a number of years is shown in the following table :—

CAUSE OF DEATH.	1905	1906	1907	1908	Average for years 1905—1908	1909
Premature Birth	13	11	13	22	15	22
Atrophy, Debility, Marasmus...	5	8	14	18	11	10
Diarrhœal Diseases	14	33	10	12	17	9
Measles	1	—	—	5	1	—
Whooping Cough	—	9	—	12	5	—
Bronchitis and Pneumonia ...	8	26	20	15	17	8
Tuberculous Diseases	3	2	1	6	3	3
Convulsions	2	2	3	4	3	4
All other Diseases	24	10	11	13	15	15
TOTALS	70	101	72	107	87	71

Particulars of Deaths of Illegitimate Children during 1909.

During the year 8 deaths among illegitimate children under one year of age were registered.

Age.	Sex.		Cause of Death.
4 days	M	...	Immaturity.
10 days	M	...	Debility from birth.
21 days	F	...	Inanition.
1 month	F	...	Immaturity.
1 month	F	...	Artificially fed. Marasmus.
1 month	M	...	Diarrhœa and Vomiting.
5 weeks	M	...	Accidentally suffocated in bed.
11 months	M	...	Bronchitis.

The death-rates per 1000 births of each class among legitimate and illegitimate children for the past four years are shown below:—

	1906.	1907.	1908.	**1909.**
Infantile death-rate of legitimate children ...	125	81	129	**78**
Infantile death-rate of illegitimate children...	175	219	257	**163**

Coroner's Inquests.

Inquests were held by the Coroner into the cause of 34 deaths of persons belonging to the Borough. These were eventually returned as due to Natural Causes in 17 cases, Accident or Negligence (such as falls, scalds, over-laying, poison, &c.) in 13 cases, and Suicide in 4 cases.

The proportion of inquests per 1000 deaths was 62·1, as compared with 51·4 in 1908.

The number of inquests held and the proportion per thousand deaths in each of the past ten years is shown below:—

Year.	Number of Inquests.	Proportion per 1000 Deaths.
1899	30	55·0
1900	33	54·2
1901	52	98·6
1902	42	75·4
1903	38	70·2
1904	38	69·0
1905	20	37·6
1906	33	62·2
1907	28	54·1
1908	31	51·4
1909	**34**	**62·1**

Uncertified Deaths.

These are deaths the causes of which have not been certified by a medical practitioner or by the Coroner after inquest.

Year.	Uncertified Deaths.	Percentage of Total Deaths.
1898	2	0·3
1899	1	0·1
1900	3	0·5
1901	1	0·1
1902	5	0·8

	Uncertified Deaths.	Percentage of Total Deaths.
1903	2	0·3
1904	1	0·1
1905	2	0·3
1906	1	0·1
1907	2	0·3
1908	Nil	0·0
1909	**2**	**0·3**

Still-births.

The registration of still-births is not compulsory, but no still-born child may be interred in any burial ground without a certificate from some responsible person, not necessarily a medical practitioner. As a matter of practice such certificates are generally signed by the doctor or midwife in attendance, or by a Coroner after inquest.

Under the Notification of Births Act, 1907, which came into operation on the 1st July, still-births are now compulsorily notifiable, and, in addition, it is the duty of every midwife to notify still-births to the Local Supervising Authority, i.e., in Cambridge the County Council.

The number of still-births notified under the Act of 1907 was 8, and the number notified to the County Medical Officer under the Midwives Act was 14. Allowing for duplicate notifications, and the fact that the Notification Act was in force only for the latter half of the year, we get an estimated total of 27 for the year, giving a rate of 3·1 per 100 births.

The question of the amendment of the Birth and Deaths Registration Act has been discussed for years, and was the subject of report by a Select Committee of the House of Commons in 1893.

In regard to still-births there can be no question as to the extreme desirability of amendment so as to render it impossible to bury any child except upon the production of a certificate from either a qualified Medical Practitioner or a Coroner.

Vaccination.

The Vaccination Officer has kindly supplied me with statistics relating to vaccination for the year 1908 and for the first half of 1909.

The percentage of successful vaccinations is extremely low; for England and Wales in 1907 it was 70·9. Judging from the figures given of the number of exemptions granted, this is clearly the direct result of the Vaccination Act, 1907, which came into force on the 1st January, 1908.

	1908	For the period Jan. to June, 1909.
Number of Births	790	415
Number of successful Vaccinations ...	329	153
,, ,, Certificates of Insusceptibility...	1	–
,, ,, Statutory Declarations of Conscientious objection ...	371	223
,, who died Unvaccinated	79	25
,, postponed by Medical Certificate..	1	2
,, removed to other districts ...	2	4
,, not found	4	5
,, in abeyance	3	3
Percentage successfully Vaccinated ...	41·64	36·86
Percentage successfully Vaccinated, excluding those who died Unvaccinated	46·27	39·23

	1905.	1906.	1907.	1908.	1909.
Number of Statutory Declarations (or Certificates) of conscientious objections actually received during the last few years...	66	51	96	409	470

Poor Law Relief Statistics.

I am indebted to Mr. J. Congreve, Clerk to the Poor Law Guardians, for the following figures relating to pauperism in Cambridge:—

	Half-year ended Michaelmas, 1908.	Half-year ended Michaelmas, 1909.
The number relieved in the Workhouse:—		
(*a*) Able-bodied	10	9
(*b*) Not able-bodied	230	221
(*c*) Children...	34	41
(*d*) Insane	2	1
Number of Vagrants relieved in the Workhouse	3429	4394
Number of Out-door Poor relieved	616	645
Number of Out-door Vagrants relieved ...	Nil	Nil.

Comparative Statistics.

The comparative statistics for the two areas respectively into which the district is divided, after distributing the deaths in the Union Workhouse, Addenbrooke's Hospital, Infectious Diseases Hospital, County Lunatic Asylum, and H.M. Prison, to their respective areas, are appended in the following table:—

REGISTRATION SUB-DISTRICT.	Deaths belonging.	Share of W. H.	A. H.	County Asylum.	H. M. Prison.	Infect. Diseases Hospital	Total.	Birth-rate.	Death rate.
S. Andrew-the-Less ...	297	51	37	13	1	7	406	23·4	13·1
S. Andrew-the-Great ...	108	20	7	5	—	2	142	13·8	15·1
Entire District ...	405	71	44	18	1	9	548	21·1	13·5

Part ii.

Records of Disease Incidence.

Disease of an infectious character has been more prevalent during the year than in any year since 1905, but, as will be seen from the following table, is well below the average for the past ten years. The total number of cases notified during the year is 210 (8 fatal), equal to a case-rate per thousand of the population of 5·2.

Table showing Prevalence and Mortality of all Notifiable Infectious Diseases for years 1899—1909:—

Year.	Cases Notified.	Deaths.	Percentage of deaths to cases notified.
1899	226	2	0·8
1900	276	6	2·1
1901	172	10	5·8
1902	256	9	3·5
1903	550	33	6·0
1904	183	12	6·6
1905	253	22	8·6
1906	164	14	8·5
1907	172	4	2·3
1908	138	6	4·3
Average for years 1899—1908	239	11·8	4·9
1909	210	8	3·8

Small-pox.

No case of Small-pox has been notified in the Borough during the year, but on June 22nd I received a communication from the Town Clerk of Liverpool informing me that two persons giving their address as Cambridge had been permitted to land from

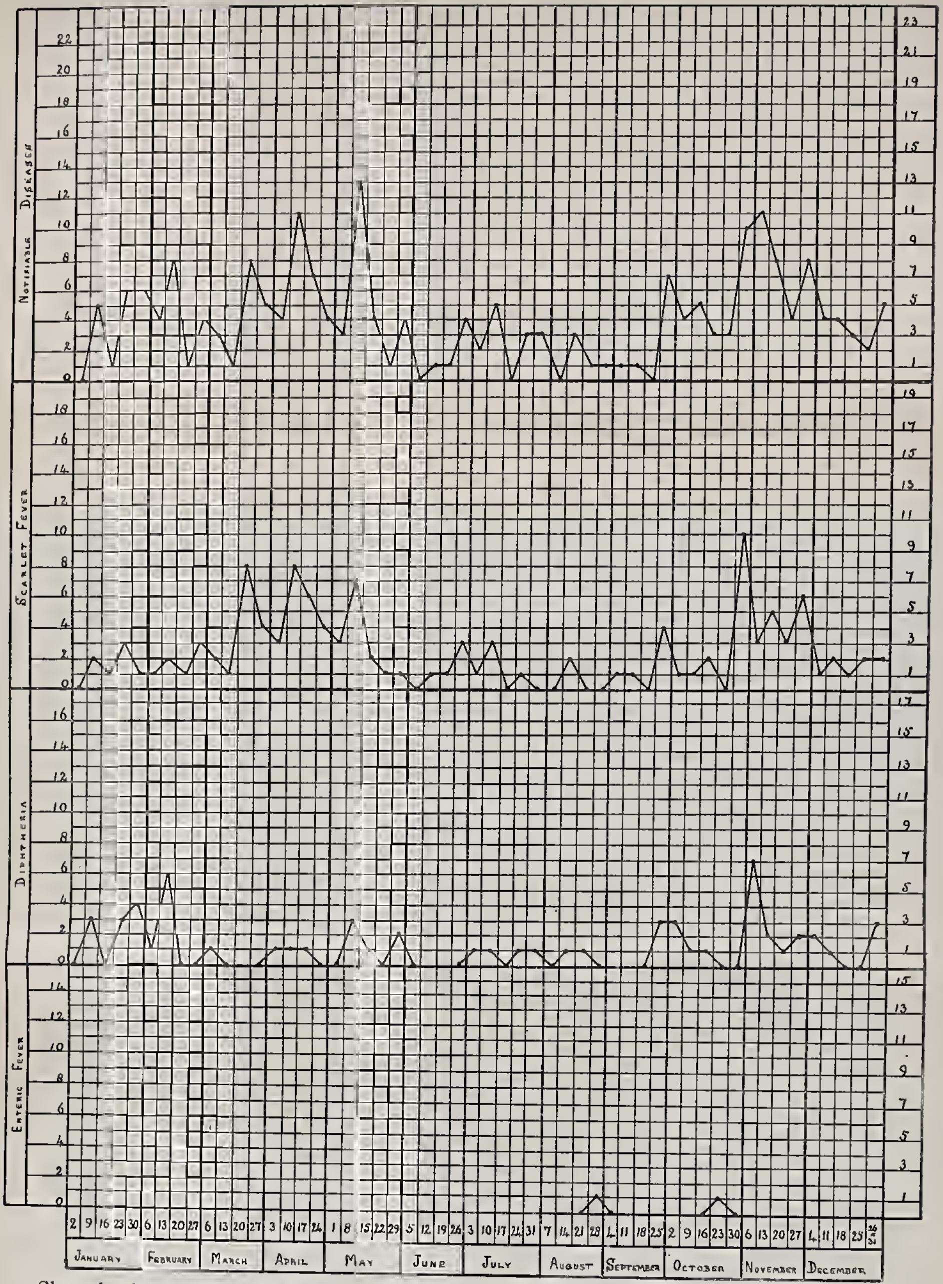


Chart showing the number of cases of all Infectious Diseases notified during each week of the year 1909, and of three specially selected Diseases, viz., Scarlet Fever, Diphtheria, and Enteric Fever.

s.s. Virginia, which had arrived at that Port with cases of Small-pox on board. On June 24th, a similar communication was received from Liverpool informing me that two persons giving their address as Cambridge had landed from s.s. Canada, on which cases of Small-pox had occurred. These people were traced and kept under observation, but did not develop the disease.

Diphtheria.

Diphtheria has been more or less present during every month of the year with the exception of June, fifty-nine cases in forty-four households having been notified, equal to a case-rate per thousand of the population of 11·8. Seven of the cases proved fatal; six of these died in the Infectious Diseases Hospital, one within 2½ hours of admission, three within 5 days of admission, one 7 days, and one 9 days after admission.

The Chart facing page 22 shows that the two periods of greatest incidence were during January and February, and October and November.

The cases may be grouped under the following headings:—(1) Imported cases; (2) cases arising from school assemblage; (3) cases due to social intercourse; (4) secondary cases in households; (5) untraceable cases.

With regard to (1) two cases were without doubt imported. The first was that of a girl in service in Cambridge who had been on a visit to London for nine or ten days, and two days after her return developed the disease. The second was a child who came from Bradford, Yorkshire, ill, and three days afterwards was notified as suffering from Diphtheria. The diagnosis in each instance was confirmed bacteriologically.

(2) Seventeen cases in thirteen households were probably the direct result of school assemblage. During January and February nine cases (one fatal) in seven households occurred amongst children attending the St. Giles group of Schools. Enquiry pointed to the introduction of the disease into the schools by Diphtheria carriers, as on swabbing the "contacts" of the earlier cases seven children in six households were found to be harbouring the diphtheria bacillus. During October and November three cases in two households occurred among children attending this group of schools.

During October and November five cases (two fatal) in four households occurred amongst the children attending New Street and Occupation Road Infants' Schools. On swabbing the "contacts" of these cases four children were discovered to be harbouring the bacillus.

(3) Two cases (both fatal) in two households were with little doubt due to social intercourse. No swab could be taken in either case.

(4) Ten cases in eight households were secondary cases in households already assailed. In eight instances the diagnosis was confirmed, and in two cases no swab was taken.

(5) Twenty-seven cases (two fatal) in twenty-seven households were sporadic cases spread over the year and had no connection one with the other either in regard to time or place. In sixteen instances the diagnosis was confirmed, and in one of the fatal cases no swab was taken.

The usual routine of taking swabs from the other members of the affected families was followed and a certain number of swabs taken at the schools. Of the 752 throats examined twelve gave positive results.

Table showing Prevalence and Mortality for years 1899—1909 :—

Year.	Cases Notified.	Deaths.	Percentage of deaths to cases notified.
1899	11	—	—
1900	63	3	4·7
1901	55	7	12·7
1902	16	2	12·5
1903	68	11	16·1
1904	39	10	25·6
1905	65	18	27·7
1906	31	12	38·7
1907	33	3	9·1
1908	78	6	7·7
Average for years 1899–1908	46	7·2	15·7
1909	59	7	11·8

During the year the Council consented to the payment of a fee of 1/- for each swab taken from "contacts." This has very greatly facilitated this work, and will doubtless prove of great assistance in the prevention and early detection of the disease.

Scarlet Fever.

Scarlet Fever has been more prevalent than during the previous three years, but is still below the average number of cases notified during the past ten years. The total number of cases notified during the year is 121 (one fatal) in eighty-one households, equal to a case-rate per thousand of the population of 3·0.

The disease was present, less or more, in all the months of the year, and reached its highest curves of incidence in the third week in March, the second week in April, and the fourth week in October. It may be remarked that no cases occurred in that part of the town known as Castle End.

In the Romsey Town District the disease was present in each month of the year with the exception of May, July, and September, and occurred chiefly in families where the children attended the Romsey Town group of schools. In all, sixty-two cases in thirty-one households occurred during the year in this part of the town. Twenty-nine were primary cases; seventeen were secondary cases in households already assailed; and sixteen cases in eight households were "return" cases, being apparently infected by a member of the family who had returned from the Isolation Hospital shortly before the onset of the illness in the family. The original source of the disease in this district could not be ascertained with any degree of certainty, but school assemblage and the undoubted presence of unrecognised cases were the chief factors in the continuation of the disease over such a long period.

With regard to the remaining cases, five cases in five households were probably due to school assemblage; in five cases in five households the infection was ascertained to be due to social intercourse with previously infected families. In one case, there is little doubt that the disease was contracted at the neighbouring village of Cherryhinton. One case was that of a member of the domestic staff at the Infectious Diseases Hospital, and another was that of the driver of the Fever Ambulance. Eight cases (one fatal) were secondary cases in households already assailed; five cases in four households were of doubtful character, and thirty-three cases in thirty-three households could not be associated with any previous case.

Table showing Prevalence and Mortality for years 1899—1909:—

Year.	Cases Notified.	Deaths.	Percentage of deaths to cases notified.
1899	157	1	0·6
1900	141	2	1·4
1901	74	—	—
1902	203	3	1·4
1903	284	6	2·1
1904	66	2	3·0
1905	132	2	1·5
1906	101	1	1·0
1907	76	1	1·3
1908	36	—	—
Average for years 1899–1908	127	1·8	1·4
1909	121	1	0·8

Typhoid Fever.

It is again my pleasant duty to report that the incidence of Typhoid Fever, which has been on the decline since the year 1899, is well below the average for the past ten years, only two cases having been notified during the year, viz., one on August 26th, and one on October 17th. This is the smallest number of cases notified in any year since the Infectious Diseases (Notification) Act came into force, with the exception of 1907, when the number was identical. The first case was that of a waiter who, after a five weeks' engagement at an hotel at Lowestoft, came home ill on August 21st, and, after examination of the blood serum, was notified as suffering from Enteric Fever. The second was that of a young lady who had come on a visit to her sister. Enquiry elicited that she was a nurse who had been nursing cases of Enteric Fever at one of the London Hospitals, and had been unwell for a fortnight before the date of her arrival here.

Table showing Prevalence and Mortality for years 1899—1909:—

Year.	Cases Notified.	Deaths.	Percentage of cases to deaths notified.
1899	35	1	2·8
1900	31	1	3·2
1901	22	3	13·6
1902	13	3	23·0
1903	6	1	16·6
1904	9	—	—
1905	8	2	25·0
1906	4	1	25·0
1907	2	—	—
1908	6	—	—
Average for years 1899–1908	13·6	1·2	8·8
1909	2	—	—

Puerperal Fever.

No case of Puerperal Fever has been notified during the year.

Table showing Prevalence and Mortality for years 1899—1909 :

Year.	Cases Notified.	Deaths.	Percentage of deaths to cases notified.
1899	2	2	100·0
1900	3	1	33·3
1901	1	1	100·0
1902	1	1	100·0
1903	2	1	50·0
1904	1	—	—
1905	5	2	40·0
1906	1	—	—
1907	10	2	20·0
1908	1	1	100·0
Average for years 1899–1908	2·7	1·1	40·7
1909	—	—	—

Erysipelas.

Twenty-eight cases of Erysipelas (one fatal) have been notified during the year, equal to a case-rate per thousand of the population of 0·69.

Table showing Prevalence and Mortality for years 1899—1909 :—

Year.	Cases Notified.	Deaths.	Percentage of deaths to cases notified.
1899	21	—	—
1900	35	1	2·8
1901	20	2	10·2
1902	22	—	—
1903	23	—	—
1904	33	1	3·0
1905	43	—	—
1906	27	2	7·4
1907	51	4	7·8
1908	17	—	—
Average for years 1899–1908	29·2	1·0	3·4
1909	28	1	3·6

Other Notifiable Diseases.

No case of Plague, Typhus Fever, Relapsing Fever or Continued Fever has been notified during the year.

No case of Cholera has been notified during the year, but two communications from the Port Medical Officer of Harwich, and three from the Medical Officer of Health of the Port of London, were received during August and September informing me that persons from a Cholera infected Port had been allowed to proceed to Cambridge. Six persons giving addresses in Cambridge were reported to me, and these were at once communicated with.

Diarrhœa.

Number of deaths...	15
Death-rate per 1000 living ...	0·37
Death-rate in England and Wales.	0·28

The disease was present during June, August, September, October, and November, and caused fifteen deaths. Eight of the deaths occurred during October and November, in the female ward of the infirmary at the Union Workhouse. The disease was evidently spread by personal contact, and was favoured by the somewhat crowded condition of the ward, and by the enfeebled condition of the patients, who were all old women, aged from 72 to 90 years.

The deaths and death-rate from Diarrhœa among persons belonging to the district during the previous twenty years are set out in the following table:—

	Deaths.	Death-rate.		Deaths.	Death-rate.
1889	8	0·21	1899	43	1·12
1890	24	0·65	1900	17	0·44
1891	22	0·59	1901	21	0·54
1892	17	0·45	1902	7	0·18
1893	57	1·52	1903	6	0·15
1894	11	0·29	1904	29	0·73
1895	28	0·74	1905	14	0·35
1896	17	0·44	1906	42	1·05
1897	24	0·63	1907	12	0·22
1898	37	0·96	1908	9	0·22

Annual average for years				Annual average for years			
1889—1898	24·5	...	0·65	1899—1908	20·0	...	0·50

	DEATHS.		DEATH-RATE.
Annual average for years 1889—1908	22·2	...	0·57

Measles.

Number of Deaths	1
Death-rate per 1000 living	0·02
Death-rate for England & Wales ...	0·35

The deaths and death-rate from Measles among persons belonging to the district during the previous twenty years are set out in the following table :—

	DEATHS.	DEATH-RATE.		DEATHS.	DEATH-RATE.
1889	0	0·00	1899	0	0·00
1890	7	0·19	1900	1	0·02
1891	0	0·00	1901	2	0·05
1892	0	0·00	1902	44	1·12
1893	0	0·00	1903	0	0·00
1894	25	0·66	1904	12	0·30
1895	0	0·00	1905	9	0·22
1896	0	0·00	1906	1	0·02
1897	0	0·00	1907	0	0·00
1898	35	0·91	1908	33	0·82

Annual average for years				Annual average for years			
1889—1898	6·7	...	0·17	1899—1908	10·2	...	0·26

	DEATHS.		DEATH-RATE.
Annual average for years 1889—1908	8·4	...	0·22

Whooping Cough.

No deaths have been registered during the year.

The deaths and death-rate from Whooping Cough among persons belonging to the district during the previous twenty years are set out in the following table:—

	Deaths.	Death-rate.		Deaths.	Death-rate.
1889	13	0·35	1899	6	0·15
1890	39	1·06	1900	21	0·54
1891	21	0·56	1901	0	0·00
1892	2	0·05	1902	5	0·12
1893	9	0·24	1903	7	0·17
1894	17	0·45	1904	0	0·00
1895	2	0·05	1905	0	0·00
1896	19	0·50	1906	16	0·40
1897	3	0·07	1907	0	0·00
1898	21	0·54	1908	32	0·79
Annual average for years. 1889—1898	14·6	0·39	Annual average for years. 1899—1908	8·7	0·22

	Deaths.	Death-rate.
Annual average for years 1889—1908	11·6	0·30

A weekly record of the Disease Incidence of the year is set out in the table on following page.

Week Ending.	Small-pox.	Diphtheria.	Membranous Croup.	Erysipelas.	Scarlet Fever.	Enteric Fever.	Puerperal Fever.	Total.
Jan. 2	...	...	...	...	...	...	...	...
,, 9	...	3	...	...	2	...	...	5
,, 16	...	...	...	...	1	...	...	1
,, 23	...	3	...	...	3	...	...	6
,, 30	...	4	...	1	1	...	..	6
Feb. 6	...	1	...	2	1	...	...	4
,, 13	...	6	...	...	2	...	...	8
,, 20	...	...	...	...	1	...	...	1
,, 27	...	...	...	1	3	...	...	4
Mar. 6	...	1	...	...	2	...	...	3
,, 13	...	...	...	...	1	...	...	1
,, 20	...	...	...	...	8	...	...	8
,, 27	...	...	...	1	4	...	..	5
April 3	...	1	...	...	3	...	...	4
,, 10	...	1	...	2	8	...	...	11
,, 17	...	1	...	...	6	...	...	7
,, 24	...	...	...	...	4	...	...	4
May 1	...	...	...	...	3	...	...	3
,, 8	...	3	..	3	7	...	...	13
,, 15	...	1	...	1	2	...	...	4
,, 22	...	...	...	...	1	...	...	1
,, 29	...	2	...	1	1	...	...	4
June 5	...	...	...	...	...	...	...	...
,, 12	...	...	...	...	1	...	...	1
,, 19	...	...	...	...	1	...	...	1
,, 26	...	...	...	1	3	...	...	4
July 3	...	1	...	...	1	...	...	2
,, 10	...	1	...	1	3	...	...	5
,, 17	...	...	...	...	...	...	...	...
,, 24	...	1	...	1	1	..	...	3
,, 31	...	1	...	2	...	...	...	3
Aug. 7	...	...	...	...	...	...	...	...
,, 14	...	1	...	..	2	...	...	3
,, 21	...	1	...	...	...	...	...	1
,, 28	...	...	...	...	...	1	...	1
Sept. 4	...	...	...	...	1	...	...	1
,, 11	...	...	...	...	1	...	...	1
,, 18	...	...	...	...	...	...	...	...
,, 25	...	3	...	...	4	...	...	7
Oct. 2	...	3	...	...	1	...	...	4
,, 9	...	1	...	3	1	...	...	5
,, 16	...	1	...	...	2	...	...	3
,, 23	...	...	...	2	...	1	...	3
,, 30	...	...	...	...	10	...	...	10
Nov. 6	...	7	...	1	3	...	...	11
,, 13	...	2	...	1	5	...	...	8
,, 20	...	1	...	...	3	...	...	4
,, 27	...	2	...	...	6	...	...	8
Dec. 4	...	2	...	1	1	...	...	4
,, 11	...	1	...	1	2	...	...	4
,, 18	...	...	...	2	1	...	...	3
,, 25	...	...	...	...	2	...	...	2
,, 26—31 ...	...	3	...	...	2	...	...	5
TOTALS	...	59	...	28	121	2	...	210

Tuberculous Phthisis.

The measures which so far have been adopted in Cambridge for the control of Phthisis include :—

1.—Notification.
2.—Visitation.
3.—Disinfection.
4.—Hospital Treatment and Isolation.

In view of the public interest created by the visit of the Tuberculosis Exhibition during the current year, it may serve a useful purpose to explain here in some detail the steps taken under each of the above headings, and to consider the question of still further extending their operation, or of initiating preventive measures in other directions.

(1). Voluntary Notification.—On April 18th, 1907, a scheme for the voluntary notification of Phthisis was adopted by the Council. This had received the support of the Cambridge Medical Society which had passed a resolution to the effect: "That in the opinion of the Cambridge Medical Society it is eminently desirable that steps be taken by the Local Health Authority to initiate a system of voluntary notification of Phthisis."

The voluntary notifications received since then and the number of deaths are as follows :—

Cases notified, April to December, 1907, ...	16	Deaths ...	24
Cases notified in 1908	37	,, ...	40
Cases notified in 1909	14	,, ...	30

The actual number of cases existing at any time is generally estimated at from three to four times the number of deaths. It will thus be seen that the number of cases notified forms a very small proportion of the total.

Compulsory Notification.—Towards the end of 1908 an important step was taken by the Local Government Board. An Order under Section 130 of the Public Health Act, 1875, was issued, making Pulmonary Tuberculosis among persons in receipt of Poor Law Relief a compulsorily notifiable disease.

The Regulations (known as The Public Health (Tuberculosis) Regulations, 1908), came into operation on 1st January, 1909.

The provisions relating to notification are as follows :—

(a) Notification by Medical Officers of Poor Law Institutions. Article IV. directs that notification shall be made within 48 hours of the recognition of a case to the Medical Officer of Health of the district in which the person resided before admission to the Institution.

(b) Notification by District Medical Officers. Article V. directs that a similar notification shall be sent within 48 hours of the recognition of the disease in any poor person whom he is attending as District Medical Officer.

(c) Notification by Superintending Officers of Poor Law Institutions. Article VI. places upon this officer the duty of notifying the Medical Officer of Health of the intended place of destination and address of any case of Pulmonary Tuberculosis leaving the Institution, the notification to be sent within 48 hours of the departure from the Institution of the person to whom it relates.

(d) Notification of change of address by Relieving Officers. Article VII. places upon Relieving Officers the duty of notifying the change of address (other than a removal to a Poor Law Institution) of any person who has been notified by the District Medical Officer.

Any objection to making Consumption compulsorily notifiable is removed by Article IX. (1) of the Regulations which provides that no person who has been notified shall be liable to any penalty or subject to any restrictions, prohibition or disability affecting him or his employment or residence on the ground of his suffering from Consumption.

The Regulations also provide for the payment of fees to the Officers who have to make notifications.

The number of notifications received under these Regulations during 1909 was 17.

(2) On receipt of a notification a visit is paid, in the first instance by the Medical Officer of Health and afterwards by the Health Visitors of the League of Physical Education and Improvement.

Enquiries are made into the history of each case, with a view mainly to discover possible sources of infection, and to obtain information regarding the sanitary surroundings of the patient. Much of the information can only be obtained after several visits, and as it is collected it is entered on the card relating to the case. The following is a copy of the enquiry card in use:—

Front.] BOROUGH OF CAMBRIDGE.

PULMONARY TUBERCULOSIS.

Name.	Age.	Address.	For how long.

Notified by.................................... Date.........................

How long ill?..................... Examination of Sputum.........

Dates of: Start of Cough................. Hæmoptysis..............

Pleurisy.......................... Inflammation ....

Previous addresses (if any) during and for one year before onset.......

Isolation { Do any others sleep in the same room, if so, how many? ....
Bed to self ....

Ages of Family ....

Previous cases in household { of Phthisis ....
of other Tubercular diseases...........

Do any other members suffer from Bronchitis?.........................

Occupation................................ Still at work. Yes. No.

Where ?..

Previous places of occupation ....

Worry............................. Amount of food.....................

In case of Mothers, have they suckled many children, if so, for how long? ....

Precautions with regard to Spit ....

....

Back.] Name.. Address.................................. Notification No.........

House...................... Bedrooms.........................

Living Rooms...... Rent......

Clean......................... Dusty ....

Dirty......................... Damp ....

Defects ....

....

Do the windows open? L.R. ....

B.R. ....

Are they kept open?... L.R. ....

B.R. ....

Water Closet...................... Position..................

Flushing Cistern ....

Defects ....

Is disinfection required? Living room...... Bedroom......

Periodical cleansing every.........................months.

Remarks ....

....

....

....

....

....

Action taken...

....

....

....

Progress..

....

....

....

....

To cases requiring them cardboard sputum boxes or bottles are given, along with paper handkerchiefs and disinfectants. When not under medical supervision, advice (both printed and verbal) is given, and in every case any sanitary defects such as dampness, insufficient ventilation, &c., are dealt with. The following is a copy of the advice leaflet used:—

BOROUGH OF CAMBRIDGE.

PRECAUTIONS which should be taken to prevent communication of CONSUMPTION from one person to another.

INDIVIDUAL.

A consumptive patient ought to cover the mouth with a rag or muslin on coughing, so that the infective particles of spray may be at once arrested.

A consumptive patient should not swallow the sputum.

A consumptive patient should not spit in such a way as to soil handkerchiefs, clothing, articles of furniture, floors, or walls, where the sputum might become dry and be distributed as dust. He should spit into a portable spittoon or cup containing water or disinfecting fluid, or into a rag or piece of fine muslin. The contents of the first should be emptied down the water-closet, or put at the back of a strong fire, and the vessel itself subsequently scalded or boiled. Rags or muslin after use should be burnt as soon as practicable, and not allowed to lie about and become dry.

Pillow-slips, sheets, handkerchiefs, or other things which have become soiled should be kept moist until washed, and during washing should be boiled for five minutes.

Eating utensils, or any other things which have been introduced into the mouth of a consumptive patient, should be scalded with boiling water and subsequently well washed. They should be kept for the patient's use alone.

Persons in attendance on consumptive patients should be very careful to wash and well scrub their hands after touching the patient or anything which may have become soiled by their sputum.

A consumptive patient should not kiss other persons.

Rooms Occupied by a Consumptive Patient.

A consumptive patient should occupy a separate bedroom, and this room should be so situated as to admit as much sunshine and fresh air as possible. The windows should be kept open to their widest extent during both summer and winter. Neither carpets nor curtains should be used.

Any room occupied by a consumptive patient should be frequently and thoroughly cleansed ; the furnishings therefore should be few and simple. Damp dusters or dough should be used to wipe the ceiling, walls, floor, or furniture, in order that no dust may be raised during cleansing ; the dusters should be subsequently treated as the handkerchiefs mentioned above, or, if of not much value, burnt ; the dough should be burnt.

Rooms occupied by consumptives should be periodically thoroughly disinfected ; such disinfection will be carried out by the Sanitary Officials if a request be sent to the Medical Officer of Health at the Guildhall. Cleansing and disinfection should on no account be omitted when a patient ceases to occupy a room.

To Avoid Taking the Disease.

1. The stuffy poisonous air of unventilated bedrooms, workrooms, etc., make one liable to Consumption. Therefore rooms should never be overcrowded, chimneys never blocked up. So far as possible windows should always be kept widely opened day and night throughout the year. Prevent draughts by screens, etc., and provide warmer clothing for the inmates if they are cold.
2. In any case prolonged attacks of cough and cold, consult a doctor.
3. Allow as much sunshine and fresh air into the house as possible. These are the best preventives of Consumption.

4. All cows' milk, especially for children, should be boiled. Place the milk, in a vessel, which should be put in a large saucepan containing cold water: heat the water till it boils briskly, and keep it boiling for ten or fifteen minutes, then remove the vessel containing the milk and cool by standing in cold water or in the open air. Protect from flies and dust by means of a muslin cover.

Requests for disinfection, for disinfectants, spittoons, etc. should be made to the Medical Officer of Health at the undermentioned address.

PUBLIC HEALTH DEPARTMENT,
GUILDHALL, CAMBRIDGE.

It would be possible to extend still further the measures at present in operation in the Borough in the direction of having notices warning persons against indiscriminate spitting, posted up in suitable places, e.g., public houses, common lodging-houses, public vehicles, halls and places of public entertainment, and in workshops and factories. Such notices might be supported by the adoption of a bye-law prohibiting the practice under a penalty.

(3) Disinfection is always offered and in many instances permitted. The number of rooms disinfected in 1908 was 44, and the number of articles disinfected 294. In 1909 the number of rooms disinfected was 30 and the number of articles 231.

The following Circular Letter (with a stamped addressed card for reply) is sent to any house in which a death from Phthisis occurs, unless a request for disinfection has been already received:—

BOROUGH OF CAMBRIDGE.

PUBLIC HEALTH DEPARTMENT,
GUILDHALL, CAMBRIDGE,

........................*1910.*

To............. ....

....

DEAR SIR OR MADAM,

In connection with the death from Consumption reported as having occurred at.. allow me to direct your attention to the important fact that Consumption is now recognised as an infectious disease, and is chiefly communicated from one person to another by inhaling the dust of the room occupied or previously occupied by the patient.

I beg to advise you that the following works are necesssary in order to prevent the risk of similar cases arising in the house, viz.—

1. Strip the wall paper off after soaking it with water. The paper should be afterwards burned in the fireplace of the same room.

N.B.—The chief danger is from dust. Hence all articles should be thoroughly wetted before cleansing them

2. Thoroughly wash the floor, walls, ceiling and all woodwork (including picture frames) of the room.

3. Wash all bed and body linen and other washable articles, and expose all personal clothing out of doors for several hours in bright sunshine.

The Inspector will arrange for the removal of the bedding to have complete disinfection if you will fill up the enclosed card stating what time will be convenient for him to call.

Yours faithfully,

Medical Officer of Health.

Enclosures—
Leaflet.
Reply Form.

[Reply Form—Front.]

THE MEDICAL OFFICER OF HEALTH,
PUBLIC HEALTH DEPARTMENT,
GUILDHALL,
CAMBRIDGE.

[Reply Form—Back.]

Please instruct the Inspector to call at the undermentioned address on..in order to remove the bedding for disinfection.

Name..

Address..

---

(4) HOSPITAL TREATMENT AND ISOLATION.—In January, 1908, the Council resolved "that arrangements be made by the Medical Officer of Health to admit a few advanced cases into the Infectious Diseases Hospital, and to specially select those cases which he thinks are a source of danger to their surroundings." The block known as the Enteric Fever pavilion was therefore set apart for the purpose, and for the greater part of the time it has been available for this object. The accommodation consists of two wards, each capable of taking three patients.

In 1908 eighteen patients were admitted, and in 1909 eleven patients were admitted. The object in view is the removal of a source of infection and the education of the consumptive in the precautions which, on his return home, will remove any risk to those living with him.

The experience which has been gained by this scheme has proved that there is a need for further accommodation, and in December the Council sanctioned a proposal of the Health Committee to erect a new pavilion specially for a further extension of this work.

In the Memorandum of the Medical Officer of the Local Government Board on Administrative Measures against Tuberculosis, issued in February, 1909, are set forth the chief measures that can be taken against the disease, and the different forms of aid that can be given to the patient either through administrative or voluntary agencies. As an indication of the means by which the action already taken by the Health Committee may be amplified and extended it may be useful if those sections of the Memorandum relating to measures not already referred to be reproduced here.

As a means of early diagnosis and of bringing a patient into relationship with the agencies for aid that his circumstances indicate as needed, the most important is the Tuberculosis Dispensary.

"Under present conditions a large proportion of the total cases of pulmonary tuberculosis remain unrecognised until either consolidation or cavitation of lungs has occurred and patients are approaching or have reached the period of complete disablement for work. In such cases there must already have been many opportunities of spreading infection. Happily, there is strong reason to think that usually only those who have been exposed to protracted infection become infected to an extent that produces serious disease; but it is, nevertheless, very important that the precautionary measures should be begun at an early period of the disease, especially as this enables the patient himself to receive effective, because early, treatment.

The visits following notification of cases of pulmonary tuberculosis may not infrequently be made the means of securing early diagnosis of previously unrecognised cases in the same household. At this point, among others, voluntary and official agencies can join forces for the giving of hospital and dispensary letters to failing members of the affected household.

THE TUBERCULOSIS DISPENSARY.—The object of this institution is to secure early diagnosis for patients suspected to be suffering from pulmonary tuberculosis, and to direct their treatment in the light of knowledge not only of their medical, but also of their domestic and industrial needs. The ideal of the dispensary implies, therefore, a careful system of domiciliary visitation and investigation.

Such visitation and investigation have already been recommended, and it is evidently undesirable that visits to the same patient should be duplicated. When such a dispensary is already at work, arrangements can be made for nurses attached to the dispensary to visit the patients at home, and enter the information obtained by them on forms, which will subsequently be seen both by the dispensary physician and the medical officer of health. These nurses in some districts will be the health visitors of the sanitary authority, and in such cases the domiciliary work of the dispensary becomes a sub-department of the medical officer of health's work.

A well-organised tuberculosis dispensary becomes a valuable aid in securing more general notification of cases of tuberculosis; and its visitors can not only secure that domestic precautions are taken, but also that the patients are brought into touch with the different forms of domestic aid, or with the sanatorium or hospital treatment that the needs of the individual case indicate.

A tuberculosis dispensary is specially adapted for the needs of large towns. When local cicumstances do not permit of its formation, similar work can be organised in connection with other dispensaries, and with the out-patient departments of hospitals, voluntary or official, health visitors being employed, as circumstances permit. Whether a new organisation is started, or whether—as may sometimes be both economical and efficient—old organisations are modified and improved for the new work, the essential points are that the doctor when treating his patient shall have before him all the circumstances relating to the patient's manner of life likely to aid him in giving rational advice ; that the patient shall receive help adapted to his social needs ; and that there shall be no redundancy or lack of supervision and of the help requisite for the patient and for the protection of others against infection."

The main features of such a dispensary could readily be embodied in some comparatively simple scheme whereby poor persons who are known to be continuously exposed to infection might be medically examined and where required put in touch with aid suitable to their needs. With the co-operation of the medical staff of Addenbrooke's Hospital and of the League of Physical Education and Improvement as an essential part of such a scheme its success would be ensured.

Mortality from Tuberculous Phthisis in 1909.

Number of deaths	33
Death-rate per 1000 living ...	0·81

The number of deaths is eleven less than during the previous year, and seventeen below the average yearly number of deaths for the past twenty years.

Nineteen of the deaths were of males, and 14 of females.

AGES AT DEATH.

Years.	1–	5–	10–	15–	20–	25–	35–	45–	55 and upwards.
Males	...	...	...	...	3	6	3	4	3
Females	...	...	...	2	2	3	2	1	4

Twenty-three of the deaths belonged to the St. Andrew the Less Sub-district, and 10 to the St. Andrew the Great Sub-district. Four deaths of Cambridge residents occurred in the Union Workhouse, two in the Infectious Diseases Hospital, and three in Fulbourn Asylum.

The occupations were:—

Army Pensioner	1	Kennel Man	1
Baker	1	Labourer	3
Builder	1	Librarian	1
Bricklayer	1	Licensed Victualler	1
Carman	1	Photographer	1
Clerk (Brewer's)	1	Professional Athlete	1
Commercial Traveller	1	Railway Servant	1
General Dealer	1	Shoemaker	1

In the remainder the designation under this heading is that of Wife 5; Son 1; Daughter 4. No designation 5.

The deaths and death-rate from Phthisis among persons belonging to the district, during the past twenty years are set out in the following table:—

	Deaths.	Death-rate.		Deaths.	Death-rate.
1889	65	1·77	1899	41	1·06
1890	78	2·12	1900	47	1·21
1891	51	1·37	1901	48	1·23
1892	59	1·59	1902	42	1·07
1893	49	1·31	1903	48	1·22
1894	58	1·54	1904	38	0·96
1895	57	1·51	1905	40	1·01
1896	56	1·47	1906	42	1·05
1897	54	1·42	1907	41	1·02
1898	45	1·17	1908	44	1·09
Annual average for years. 1889—1898	57·2	1·52	Annual average for years. 1899—1908	43·1	1·09

	Deaths.	Death-rate.
Annual average for years 1889—1908	50·1	1·30

Other Tubercular Diseases.

Number of Deaths 15
Death-rate per 1000 living 0·37

The number of deaths registered from these diseases is five less than in 1908.

Females contributed 11 deaths, and Males 4; 6 of the deaths were of children under 10 years of age.

AGES AT DEATH.

Years	0–	1–	5–	10–	15–	20–	25–	35–	45–	55 and upwards.
Males	1	–	–	–	–	1	–	–	2	–
Females ...	2	2	1	1	–	–	2	1	1	1

The deaths from these diseases among persons belonging to the district during the past ten years are set out in the following table :—

	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	Average for years 1899—1908	1909
Tubercular Meningitis	10	3	9	7	4	9	6	3	6	8	6	7
Tubercular Peritonitis and Tabes Mesenterica	6	3	4	1	4	–	3	–	3	4	3	1
Other Forms	4	9	7	12	7	9	1	2	7	8	6	7
	20	15	20	20	15	18	10	5	16	20	15	15

Cancer and other Malignant Diseases.

Number of Deaths 54
Death-rate per 1000 living 1·33

The number of deaths registered from these diseases is 1 more than during the year 1908, and is 15 above the yearly average number of deaths for the past twenty years.

Twenty-two of the deaths were of males, and thirty-two of females. Twenty-three were registered as Carcinoma, two as Sarcoma, and sixteen as Cancer or Malignant Disease.

The following is a list of parts affected, and the number of deaths from each :—

Part affected.	Male.	Female.
Lip, Tongue, Lower Jaw...	4	1
Larynx	1	—
Neck	1	—
Mediastinal Glands	1	1
Breast	—	3
Abdomen	—	3
Liver	6	5
Stomach	3	2
Pancreas	1	1
Intestines	3	9
Urinary Organs	1	—
Uterus and Appendages	—	4
Peritoneum	—	1
Not stated	1	2

The deaths and death-rate from Cancer among persons belonging to the district, during the past twenty years are set out in the following table :—

	Deaths.	Death-Rate.		Deaths.	Death-Rate.
1889	31	0·84	1899	40	1·04
1890	39	1·06	1900	44	1·13
1891	48	1·29	1901	33	0·85
1892	30	0·80	1902	23	0·59
1893	33	0·88	1903	34	0·86
1894	53	1·41	1904	44	1·11
1895	41	1·08	1905	46	1·16
1896	42	1·10	1906	34	0·85
1897	27	0·71	1907	47	1·17
1898	34	0·88	1908	53	1·32
Annual average for years. 1889—1898	37·8	1·01	Annual average for years. 1899—1908	39·8	1·01

	Deaths.	Death-rate.
Annual average for years 1889—1908	38·8	1·01

Influenza.

Number of deaths	16
Death-rate per 1000 living	0·39

The number of deaths registered from this cause is seven more than in 1908.

The deaths and death-rate from Influenza among persons belonging to the district during the past ten years are set out in the following table:—

	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
Deaths	13	21	9	11	6	7	10	2	14	9
Death-rate	0·33	0·54	0·23	0·28	0·15	0·17	0·25	0·05	0·35	0·22

Diseases of the Respiratory System.

Number of deaths	75
Death-rate per 1000 living ...	1·86

The number of deaths registered from these diseases is six less than in 1908, and twelve below the average yearly number for the past ten years.

The following table shows the age distribution of the deaths :—

	0–	1–	5–	10–	15–	20–	25–	35–	45–	55–	65 and upw'ds	Tot.
Bronchitis ...	4	1	—	—	—	—	—	1	2	7	25	40
Pneumonia ...	2	2	—	1	1	—	1	4	3	—	5	19
Broncho-Pneumonia ...	2	2	—	—	—	—	—	1	—	2	3	10
Others ...	—	1	—	—	—	—	—	—	1	1	3	6
Totals ...	8	6	—	1	1	—	1	6	6	10	36	75

The deaths recorded from the most important members of this group of diseases amongst persons belonging to the district during the past ten years are set out in the following table :—

	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	Average for years 1899—1908.
Bronchitis ...	49	70	47	52	49	45	44	41	38	33	47
Pneumonia ..	15	23	17	24	22	17	21	18	14	23	19
Broncho-Pneumonia.	9	19	8	19	10	14	9	28	20	21	16
Others ...	11	3	14	3	3	4	—	12	8	4	6
Totals ...	84	115	86	98	84	80	74	99	80	81	88
Death-rate ...	2·18	2·97	2·22	2·51	2·14	2·03	1·86	2·49	2·00	2·01	2·24

Part iii.

General Sanitation.

Physical Features and General Character of the District.

A short concise description is given in the report for the year 1905.

Housing.

The need for reliable and accurate information as to the sufficiency of the accommodation for persons of the poorer working classes is making itself felt. Owing to the closure of some houses by order of the Justices, and the demolition of others by owners it has been stated that a certain amount of hardship has resulted to the displaced tenants from the absence of houses at low rents to which they might remove. If as seems to have been the case in a few instances, the action taken by the Health Committee has led to overcrowding by the reception as lodgers of displaced tenants or to the removal of families to the Workhouse, the Local Authority will require to consider any further action most carefully. The first need, however, is to obtain the precise facts. The Assistant Overseer (Mr. W. Campbell), has kindly supplied me with the following figures taken from the rate books as to the number of occupied and empty houses at various rentals in the town on July 19th, 1909 :—

Rateable Value.	Under £4 per year.	£4 and under £5 10s.	£5 10s. and under £7 10s.	£7 10s. and under £10.	£10 and under £15.	£15 and under £20.	£20 and under £30.	£30 and under £50.	£50 and over.	TOTAL.
Occupied ...	45	391	911	2014	2560	976	922	972	852	9643
Unoccupied..	9	43	37	21	19	20	19	25	16	209
Percentage of unoccupied to total houses in each group.	16·6	9·9	3·9	1·0	0·7	2·0	2·0	2·5	1·8	2·1

The Borough Surveyor has also informed me that there are very few plans passed of cheap houses which would meet the requirements of the poorer classes; the precise number is unknown.

From personal inspection and from reports of the Sanitary Inspectors the same conclusion has been drawn.

So far as the available facts go, there is evidently a dearth of cheap houses for the working classes, resulting chiefly from the failure of private enterprise to meet the requirements. The accommodation available in the shape of old dwellings is in many instances scarcely up to modern standards, and in a number of instances it has been absolutely necessary to have the houses condemned as unfit for habitation. It would seem, therefore, that the only course open to the Local Authority is (1) to endeavour to bring the existing small cottage property into a reasonably sanitary condition, although it may not in all respects comply with modern requirements, and (2) to consider the advisability, or otherwise, of erecting cottages suitable for the working classes.

In June, representations under Section 30 of the Housing of the Working Classes Acts were made regarding the houses Nos. 1, 2, 3, and 4, Comet Yard, and Nos. 77, 79, and 81, Castle Street, and Nos. 9, 10, 11, 12, 13, 14, and 15, Kettle's Yard. Closing Orders were obtained from the Justices on 29th October, 1909.

During the year fifty-nine houses, situate in various parts of town, were reported as being unwholesome or filthy. In some instances the houses were closed, and in others, on notice from the Inspector of Nuisances, the premises were cleansed.

Eleven cases of over-crowding have been reported. In ten instances the nuisance was satisfactorily abated by the removal of the families to larger dwellings, and in the other by the removal of some members of the family.

Sewerage and Drainage, Excrement Disposal and Removal and Disposal of House Refuse.

Short descriptions relating to these are given in the Annual Report for the year 1905.

The number of drains reconstructed, &c., during 1909 is found in Table VII. It should be noted that no fewer than 203 previously hand-flushed w.c.'s have had flushing cisterns supplied during the year.

With regard to the question of street cleansing and the removal of house refuse, complaints have been received of the amount of dust distributed during the process of scavengering and blowing from the scavenging carts.

From personal observation it must be admitted that there is room for improvement both in the receptacles used for storing house refuse and in the construction of the carts. Covered ash bins are quite exceptional and should be provided in all cases, and it should be a simple matter to improve the present type of scavenging cart.

Water Supply.

In December 1908 the Local Government Board report on the water supply was referred to the Public Health Committee for consideration.

In view of the conclusions of the Board's Inspectors that "the continued use of that part of the Company's water which is derived from the Lower Chalk is, under present conditions, dangerous to the lives and health of the large and important community to whom it is supplied," and that "in order to secure from contamination the supply of water furnished by the Cambridge University and Town Waterworks Company, the whole of that part of the supply which is derived from the Lower Chalk should be abandoned," the Company was communicated with in order to find out what steps it was proposed to take.

The Water Company replied that the report was receiving the earnest consideration of the Directors and that instructions had been given for the erection of an experimental chamber at Fulbourn works for testing in considerable quantities the sterilizing of the Company's water before delivery to the consumers by a process which the Company were given to understand would effectually remove from the water any contamination should it ever occur.

In January arrangements were made with Dr. Graham Smith for a regular bacteriological examination of the water to be made, and from the beginning of February the results of these examinations have been before the Health Committee at their monthly meetings. A report upon the examinations, prepared by Dr. Graham Smith, which was presented to the Committee in October is as follows:—

"The bacteriological examinations of the water supplied to the Town by the Cambridge University and Town Waterworks Company during the last five months have shown that under ordinary conditions no organisms indicative of pollution are present. The total number of organisms present is small, and the water may be classified as extremely good.

"After heavy rains, however, B. coli, generally considered as an indicator of fæcal contamination of some kind is often present.

"Whether under these conditions there is any potential danger to the health of the persons consuming the water depends on the source of the contamination. The two most probable sources of contamination are (1) from the villages of Fulbourn and Cherryhinton and (2) from the general gathering area.

"Contamination from the first source would undoubtedly give rise to potential danger. Contamination from the second source would probably be of very little consequence, since it would mainly be due to animal excreta.

"My experiments have been entirely confined to analysing the water as supplied from the main, and there has been no opportunity to determine the source of the contamination.

"If charted out as a continuation of the charts given in the report of the Local Government Board of Dr. Thomson and Mr. Crosthwaite, my experiments would show very similar results."

At their meeting on October 5th, in view of these facts, the Committee recommended the Council to notify the Water Company that "in the event of no improvement being shown in the reports produced by Dr. Graham Smith during the next six months the Council will consider the desirability of taking such steps as may be necessary to obtain a proper water supply."

In November the Company gave notice of their intention to apply to Parliament in the ensuing Session for leave to bring in a Bill for the following purposes (among others):—

1. To provide three new wells and pumping stations, one at Cherryhinton and one at Fulbourn, in the neighbourhood of the existing wells, and a third near the Fleam Dyke, north of Mutlow Hill.

2. To provide a small additional reservoir adjoining the existing one at Limekiln Road, Cherryhinton.

3. To sterilize or otherwise treat the water.

4. To make byelaws for preventing the pollution of water by prescribing the construction, maintenance, and use of proper drains and sewers and works in the areas from which the water would be drawn. All such byelaws to be subject to the provisions contained in

Sections 182, 183, 184, and 186 of the Public Health Act, 1875, and for the purposes of the byelaws the Company is to have the powers of a Local Authority within the meaning of these sections.

The Bill provides that any powers given for the purpose of executing those works shall cease if they are not completed within ten years.

The proposals of the Company, so far as they can be learned from the Bill, require to be viewed in relation to the recommendations of the Local Government Board's Inspectors. These are that the whole of the present supply from the Lower Chalk should be abandoned.

The consideration of the Bill as a whole has been referred to the General Purposes Committee, and steps are being taken to oppose the Bill and to safeguard the public health and the interests of the Borough.

Places over which the Council have supervision.

(1) Slaughterhouses, Knacker's Yards, and other offensive trades.

The slaughterhouses in the Borough have been the subject of a special report which is being issued along with this report. A number of them were visited and inspected by the Public Health Committee and arrangements were made to have a joint meeting with representatives of the Master Butchers' Association to consider the matters dealt with in the report.

At present only two of the slaughterhouses are subject to annual licence, and both of those have had their licences renewed during the year.

All the slaughterhouses have been regularly inspected during the year, and any defects found, have, on notice from the Inspector of Nuisances been remedied.

The Inspector of the Royal Society for the Prevention of Cruelty to Animals was re-appointed an Assistant Inspector of Nuisances, and visits the slaughterhouses with the object of preventing any unnecessary suffering or possible cruelty to animals before or during the process of slaughtering.

With regard to the inspection of meat, under existing conditions this is very unsatisfactory. So long as all slaughtering is done on private premises at any hour of the day or night, the amount of meat actually inspected must necessarily be very small.

The public markets and provision shops are regularly inspected.

On March 2nd, six cases of White Herring (12 cwt.) were, after examination, destroyed, at the request of the owner.

On April 17th, 16 stones of Headless Cod, 32 stones of Hake, 16 stones of Megrams, 32 stones of Plaice, and 32 stones of Cod, were after examination, destroyed at the request of the owner.

On October 19th, 6 stones of Fresh Haddock, were after examination, destroyed at the request of the owner.

(II.) Common Lodginghouses.

Application for registration of "The Victoria," New Street, through change of tenant, has been granted.

There are now ten licensed houses in the Borough, and these places in addition to being under the sanitary supervision of the Health Department are under the disciplinary supervision of a Sergeant of Police. During the year 120 visits to these premises have been made by the Inspector of Nuisances, who found them to be conducted in a satisfactory manner. Any defects discovered were promptly remedied by the owners.

(III.) Factories and Workshops.

1.—INSPECTION.

INCLUDING INPECTIONS MADE BY THE INSPECTOR OF NUISANCES.

Premises.	Inspections.	Written Notices.
Factories (including Factory Laundries) ...	—	—
Workshops (including Workshop Laundries) ...	124	—
Workplaces...	30	—
Total ...	154	—

2.—DEFECTS FOUND.

		No. of Defects. Found.	No. of Defects. Remedied.
Nuisances under the Public Health Act :			
Want of Cleanliness		28	28
Want of Ventilation		—	—
Overcrowding		3	3
Want of Drainage of Floors		—	—
Other Nuisances		16	16
Sanitary Accommodation	insufficient ...	—	—
	unsuitable or defective ...	4	4
	not separate for sexes ...	—	—
Offences under the Factory & Workshops Act :			
Illegal occupation of underground bakehouse (S. 101)		—	—
Breach of special sanitary requirements for Bakehouses (SS. 97 to 100)		1	1
Total ...		52	52

3.—HOME WORK.

List of Out-Workers (Section 107) :

List received from employers

Wearing Apparel—

	Twice in the Year.		Once in the Year.	
	Lists.	Out-workers.	Lists.	Out-workers.
(1) Making, &c. ...	106	1092	7	21
(2) Cleaning and Washing	—	2	—	—
	106	1094	7	21
Addresses of Out-workers ... Received from other Councils		1		—
Addresses of Out-workers ... Forwarded to other Councils		481		—
Prosecutions		9		—
No. of Inspections of Outworkers' Premises		30		—
Outwork in unwholesome Premises (Sec. 158)...		—		—
Outwork in infected Premises (Secs. 109, 110)		—		—

4.—REGISTERED WORKSHOPS.

Workshops on the Register (S. 131) at the end of the year 462.

5.—OTHER MATTERS.

Matters Notified to H.M. Inspector of Factories :

Class.		Number.
Failure to affix Abstract of the Factory and Workshops (S. 133)		2
Action taken in matters referred by H.M. Inspectors as remediable under the Public Health Acts, but not under the Factory Acts (S. 5)	Notified by H.M. Inspector ...	17
	Reports of action taken sent to H.M. Inspectors	8

Class.	Number.
Other	—
Underground Bakehouses (S. 101) :	
Certificates granted during the year	—
In use at the end of the year	8

Factories.

There are 4 factories in the district where more than 40 persons are employed, and the examination of these premises with regard to the provisions for escape in case of fire, has been attended to by the Fire Brigade Committee.

Workshops and Homeworkers' Premises.

Where work of a character specified by order of the Secretary of State is given out from a factory or workshop to be done at home it is the duty of the occupier of the factory or workshop to keep a list of the names and addresses of all persons so employed by him, and to send on or before the 1st February and 1st August every year a copy of such list to the District Council of the district in which the factory or workshop is situate.

Failure to comply with this requirement of the Act renders the occupier of the factory or workshop liable to a penalty not exceeding 40/-, and for a second or subsequent offences not exceeding £5.

It is the duty also of the District Council where the out-workers reside in another district to forward the list to the Council of that district.

These provisions are designed not only for the protection of the out-worker, but also of the general public. Authority is given by the Act to District Councils to prohibit the employment of persons in premises which are injurious or dangerous to health, and also to forbid any work being done in premises where anyone is suffering from infectious disease.

An Order has been made by the Secretary of State relating to homework, specifying the classes of work to which the Act shall apply. These include (among others) such occupations as the making, cleaning, washing, altering, ornamenting, finishing, and repairing of wearing apparel.

In Cambridge a very large number of persons are employed in this way, and it is important that the Council, in order to carry out its duties under the Act, should be furnished with those lists of out-workers.

The greatest difficulty has been experienced in the past in getting these lists, in spite of the fact that employers have been requested repeatedly to furnish them.

As a result, nine employers of out-workers were summoned for failing to send copies of their lists ot out-workers to the Council, and it is hoped that no further difficulty will be experienced in the future.

During the year 124 workshops (including 80 bakehouses), and 30 homeworkers' premises, have been examined. In nearly every instance the orders of the Sanitary Authority have been readily carried out. The following is a summary of the defects observed and the remedies applied :—

Trade Workshops and Homeworkers' Premises.	No.	Defects found to exist.	Result of Action.
Bakehouses	19	Uncleanliness.	Premises cleansed.
	9	Dilapidated.	Premises repaired.
	9	Drains Defective.	Drains re-laid.
	1	No Lavatory Accommodation.	Accommodation provided.
	1	Insufficient Closet Accommodation.	Additional Closet provided.
	4	Insufficient Light.	Additional Light provided.
Bootmaker	1	Overcrowding.	Overcrowding abated.
	1	Uncleanliness.	Premises cleansed.
Blacksmith	3	Uncleanliness.	Premises cleansed.
	1	Insufficent Closet Accommodation.	Additional Closet provided.
Bookbinder	1	Uncleanliness.	Premises cleansed.
Dressmaker	1	Uncleanliness.	Premises cleansed.
	2	Overcrowding.	Overcrowding abated.
	1	No flush to Closet.	Flushing apparatus provided
Milliner	1	Uncleanliness.	Premises cleansed.
	1	Gas Stove in room without chimney to take away fumes.	Gas stove removed.
Photographer ...	1	Do.	Gas stove removed.
Restaurant Kitchen ...	1	Uncleanliness, ventilation inadequate, and drains defective.	Defects remedied.
Shirtmaker	1	Uncleanliness.	Premises cleansed.
Tinsmith	1	Uncleanliness and no W.C.	Premises cleansed and W.C. provided.
Tailor	1	Uncleanliness.	Premises cleansed.
Tailoress...	1	Gas Stove in workroom without chimney.	Gas Stove removed.

(IV.) Dairies, Cowsheds, and Milkshops.

There are in the Borough 31 cowkeepers and 74 dairymen and milk purveyors; to this latter number must be added 40 milk purveyors who live in various parts of the County but deliver milk in the town.

The Inspectors of Nuisances have made 132 visits to cowsheds and 105 visits to dairies and milkshops during the year, and in several instances it was necessary to order cleansing and limewashing. A report upon the condition of these premises and the whole question of the milk supply will, it is hoped, be presented to the Committee during the current year.

(V.) Canal Boats.

Report under the Canal Boats Act, 1877-84, as required by the Local Government Board and communicated to the Board:—

"(1) Address of Inspector—William Tyas Taylor, 3, Prospect Row.

"(2) One inspection has been made during the year 1909 of Boats plying in the district.

"(3) In this instance the Master was unable to produce the certificate of registration when requested to, having left it on board one of the other boats near Ely, namely, "The May Flower."

"(4) There were no women or children on board, and no case of infection has been notified or traced.

"(5) Verbal notice was given to the Master of the above-mentioned boat to be more careful in future as to the custody of the certificate.

"(6) No legal proceedings have been taken during the year.

"(7) Number of registered boats—1."

Sale of Food and Drugs Acts, 1875—1907.

The number of samples taken by Inspector Dain during the year was 86.

The nature of the samples submitted to the Public Analyst, and the results of his analyses are given in the following table:—

Sample.	Number submitted to Analyst.	Genuine.	Adulterated.
Milk (Formal) ...	21	16	5
Milk (Informal) ...	6	4	2
Butter	11	11	—
Margarine	1	—	1
Coffee	3	3	—
Coffee and Chicory (Informal)...	1	1	—
Coffee Mixture (Informal)...	1	1	—
Cheese	1	1	—
Lard	1	1	—
Sugar	1	1	—
Syrup...	1	1	—
Jam	2	2	—
Mincemeat	1	1	—
Toffy	2	2	—
Gin	1	—	1
Brandy	1	1	—
Rum	1	1	—
Beer	1	1	—
Whisky	1	1	—
Total ...	58	49	9

Of the 58 samples submitted to the Analyst, 9 or 15·5 per cent. were found to be not genuine.

In addition to the above, 28 samples of milk were taken as test samples as recommended by the Board of Agriculture, without the formalities required by the Acts, and examined at the Public Health Office, and of these test samples nine were found to be not genuine, and further samples were accordingly taken formally and submitted to the Public Analyst.

Three of the formal samples of milk were deficient in fat to the extent of 5 per cent., 6 per cent., and 31 per cent. respectively. The vendor of the first sample was cautioned, and proceedings were taken in respect of the two latter. Both cases were dismissed, it being proved in the case of the sample with the 31 per cent. deficiency in fat that it had been purchased under a warranty, and that the sample was sold in the same condition as it was bought.

Two of the formal samples of milk were certified to be adulterated with added water to the extent of 4 per cent. and 18 per cent. respectively. Proceedings in respect of the latter sample resulted in a penalty of 10/- including costs. The vendor of the 4 per cent. sample was cautioned.

The samples of Margarine and Gin certified to be adulterated were reported to the Committee and the vendors of both were communicated with.

Two of the informal samples of milk were certified by the Analyst as deficient in milk-fat to the extent of 6 per cent. and 22 per cent. respectively.

The following is a copy of the quarterly reports of the Public Analyst for the Borough of Cambridge upon articles analysed by him under the above Acts for the year ended 31st December, 1909.

Samples.	By whom submitted.	Result of Analysis.	Observations.
		No samples submitted during this Quarter	
11 Milk 3 Butter	Submitted by an Officer appointed by the Town Council.	Two samples of milk were deficient in milk fat to the extent of 5% and 6% respectively. One sample of milk was adulterated with 18% of added water. All the other samples were genuine	No proceedings were taken in respect of the 5% sample of milk, but the Vendor was cautioned. Proceedings were taken in respect of the two samples of adulterated milk, with the result that the case against the Vendor of the 6% sample was dismissed, and the Vendor of the 18% sample was fined 10/- including costs.
8 Milk 6 Butter 3 Coffee 1 Coffee and Chicory	Submitted by an Officer appointed by the Town-Council.	Two samples of milk were deficient in milk fat to the extent of 22% and 6% respectively. All the other samples were genuine	No proceedings were taken in respect of the adulterated milks, the samples hav- been taken informally. Two of the samples of milk were also slightly dirty, not having been properly strained.

Samples.	By whom submitted.	Result of Analysis.	Observations.
8 Milk	Submitted by an Officer appointed by the Town Council.	The sample of Margarine was adulterated with 17% of butter. One milk was adulterated with 4% of water. One milk was deficient in milk fat to the extent of 31%. One gin was adulterated with 3% of water. All the other samples were genuine	The Vendors of the margarine, gin, and 4% milk were cautioned. Proceedings were taken against the Vendor of the 31% milk, and the case was dismissed. All the samples were taken in a formal manner prescribed by the Sale of Food and Drugs Acts.
2 Butter			
1 Cheese			
1 Margarine			
1 Lard			
1 Sugar			
1 Syrup			
2 Jam			
1 Mincemeat			
2 Toffy			
1 Coffee Mixture			
1 Gin			
1 Brandy			
1 Rum			
1 Beer			
1 Whisky			

Nuisances.

Nuisances of various kinds, as indicated in the Inspectors' Table in the Appendix to this report have been dealt with.

Methods of dealing with Infectious Diseases.

The methods of dealing with Infectious Diseases are :—

(*a*) By notification, followed by enquiry.

(*b*) Removal of patients to the Borough Infectious Diseases Hospital, or to Addenbrooke's Hospital. During the year 110 cases of Scarlet Fever (90 per cent. of those notified), one suspected case of Scarlet Fever, 47 cases of Diphtheria, 4 Diphtheria "Contacts," one case of Typhoid Fever and 10 cases of Phthisis belonging to the Town, as well as five cases of Scarlet Fever, three cases of Diphtheria, and one suspected case of Phthisis belonging to the Chesterton Urban District, have been admitted to the first-mentioned institution, and four cases of Typhoid Fever, belonging to different parts of the County have been treated at the second-mentioned institution.

(*c*) Where the patients are not removed to hospital advice is given to the householders as to how best to carry out isolation in their own homes.

(*d*) School closure or particular exclusion from school. It has been necessary during the year to recommend the closure of the following schools :—St. Peter's Boys, and St. Giles Girls' and Infants' schools on account of Diphtheria.

One hundred and forty-seven orders for the exclusion from school, for varying periods, of children from infected households have been sent to the teachers of the various elementary schools.

Circulars have been sent to 120 parents or guardians requesting them to refrain from sending any of their children to Day School, Sunday School, Church, Chapel, or other places of assemblage, and to keep them out of the streets as much as possible until the risk of infection is passed, also 29 notices to Superintendents of Sunday Schools requesting them to exclude the children of infected households from school till the risk of infection is passed.

(*e*) In cases of Diphtheria swabs are taken from other members of the family, and all known diphtheria-bearing persons are kept under observation until free from infection.

(*e*) After the removal, or at the conclusion of a case of infectious disease, the infected rooms are disinfected with Formalin either as a gas or as a spray, and the bedding, &c., is disinfected by steam at the Pumping Station.

The details of the cases of Infectious Diseases notified during the year are set out in Table III., and the localities invaded are indicated on the accompanying plan of the town. The table immediately following furnishes an account in detail of the work of disinfection:—

RECORD OF DISINFECTION, 1909.

No. of Articles from each Disease.

Diphtheria.	1202
Scarlet F.	2977
Typhoid F.	98
Influenza.	5
Measles.	69
Chicken Pox.	28
Consumption.	231
Septicæmia.	320
Cancer.	57
Tetanus.	14
Ophthalmia.	8
Vermin.	55
Miscellaneous.	163
Total.	5227
No. of Separate Stovings.	116

Details of Articles Disinfected.

Beds.	Blankets.	Bolsters.	Clothing.	Cushions.	Mattresses.
80	395	107	3173	103	298

Palliasses.	Pillows.	Quilts.	Sheets.	Miscellaneous.
16	596	121	94	243

ROOMS DISINFECTED.

Diphtheria.	Scarlet F.	Typhoid F.	Erysipelas.
59	183	8	1

Measles.	Mumps.	Chicken Pox.	Cancer.	Consumption.
40	5	3	7	30

Diarrhœa.	Influenza.	Vermin.	Miscellaneous.
3	3	22	12

Total.
376

In addition to the above, the Collignan and Maynard Wards at Addenbrooke's Hospital, the house dormatories at the Leys School, and one ward at the Union Workhouse, have been disinfected.

Notification of Births.

In August, 1908, it was decided to give six months' trial to a scheme of voluntary notification of births which was approved by the medical profession and the midwives practising in the Borough. The scheme was not intended to cover the notification of all births, but only such cases as in the opinion of the doctor or midwife attending required the attention of the Health Authority.

The six months' period of probation terminated at the end of February, but as births are allowed 42 days for registration, it was necessary to wait until all the births occurring in the period could also be registered before considering the results of the scheme.

It was then found that the total number of births registered was 412. Of these 133 were notified, 129 of these being notified by midwives and 4 by medical men.

It is impossible without a knowledge of the circumstances in each case to arrive at any reliable conclusion as to cases which should be notified.

Midwives were found to have notified 52 per cent. of the cases attended by them, and doctors 2 per cent. These figures may quite accurately represent the proportion of cases in each class of practice which would require the help of the Health Authority.

The records of the Health Visitors for practically the same six months (August 8th, 1908, to February 17th, 1909) were analysed with a view to clearing up this point. These showed that of 319 births on their visiting lists, 196 had not been notified. As the time when guidance and advice is first given to a mother is of vital importance, the following table has been compiled to show the times of the first visits paid by the Health Visitors in the case of notified and non-notified births :—

Time of first visit.	Notified Births.		Non-notified Births.	
	Number.	Percentage.	Number.	Percentage.
Within 14 days of birth ...	35	28·5	12	6·1
15 to 30 days after birth...	64	52·0	26	13·3
After 4 weeks...	24	19·5	158	80·6

It was thus apparent that of the notified births 80 per cent. were visited by the Health Visitors within a month of birth, a large proportion (28·5 per cent.) being seen within the first fortnight. The position as regards the non-notified births was exactly the reverse, 80 per cent. not being visited until after a month had elapsed since birth, and only 6·1 per cent. were visited within the first fortnight.

With those facts before them the Health Committee at their meeting in June decided to ask the Local Government Board to sanction the adoption of the Notification of Births Act, 1907. Sanction having been obtained the Act came into operation on July 1st, 1909.

The total number of births notified since that date is 351, of which 241 or 69 per cent. were notified by Midwives, and 99 or 28 per cent. by Medical men. Eleven births were notified by parents. The number of births registered as having occurred during that period is 432.

The experience gained from six months of notification under the Act has I believe entirely removed any fears that were entertained regarding it. This is entirely due to the discretion and tact of the three Health Visitors to whom every credit is due. No case is visited until the Medical Attendant or Midwife has withdrawn, and then only if the services of the Visitors are required and welcomed.

Work of Health Visitors.

From the carefully prepared reports of the Health Visitors it has been found possible to give some idea of the effect of the various methods of feeding the babies.

Before taking out any figures the following cases have been excluded :—

1. Cases dying before they were four weeks old (32).

2. Cases in which it was impossible to obtain a history (7).

3. Cases still alive which were not visited (79).

The following is the result of 746 cases reported on by the Health Visitors in 1909, and 2,576 for the four years (1906—1909) during which they have undertaken this work : —

	1909.			1906—1909.		
	Number reported on.	Number of Deaths.	Percentage of Deaths.	Number reported on.	Number of Deaths.	Percentage of Deaths.
Breast-fed entirely ...	555	8	1·4	1774	34	1·9
Breast-fed partly ...	98	7	7·1	459	30	6·5
Not breast-fed at all ...	93	7	7·5	343	41	11·9
Fed wholly or partly on cows' milk	124	9	7·2	525	45	8·5
Fed wholly or partly on condensed milk...	19	—	—	68	6	8·8
Other foods added ...	123	3	2·4	434	24	5·5

The results are even more striking if deaths from epidemic diarrhœa during 1906-1909 are alone considered.

1774 entirely Breast-fed—3 deaths or ·17 per cent.

459 partly Breast-fed—14 deaths or 3·05 per cent.

343 not Breast-fed—24 deaths or 6·99 per cent.

Of the 124 children fed wholly or partly on cows' milk, 119 had the milk boiled or sterilised.

Among the bottle-fed babies 91 were found at the first visit to have bottles with teats only, 27 had bottles with long tubes and teats, while 12 were fed with a spoon.

For the three previous years the figures were:—bottle with teat only 272, long tube and teat 138, spoon 30.

In spite of all that can be said against it the use of the Comforter is almost universal; in 318 cases it was constantly in use, and in 157 in occasional use. Short of getting rid of it all together, the Visitors have to remain content with limiting its use as much as possible and securing it from falling on the floor.

The number of visits paid by the Health Visitors to the Infants during the year was 4,050. In 106 cases between ten and twenty visits were paid to a child, and in 9 instances between twenty and thirty visits.

Hospital Accommodation.

The Hospital is situate in Mill Road, close to the Borough Boundary, on a piece of land having an area of nearly three acres.

It has been added to from time to time, and now provides accommodation for Scarlet Fever, Enteric Fever, Diphtheria, observation cases, and private patients, in separate blocks, together with the necessary Administrative Block, a Laundry, Mortuary, Discharge Room, and Ambulance Shed.

Allowing 2,000 cubic feet of space per head, the number of patients who can be isolated in each of the blocks is Scarlet Fever, 12; Enteric Fever, 6; and Diphtheria, 8.

This, together with 7 single bedrooms in the Private Block and 3 in the Observation Block, makes provision for a total of 36 patients.

Accommodation is also maintained for Small-pox cases on an isolated position at the extreme eastern boundary of the Borough.

It has been decided also to provide an entirely new pavilion for Consumptives. Plans for this are now in course of preparation for the consideration of the Committee.

The following statement shows the number of cases dealt with during the year 1909 :—

	In Hospital Dec. 31st, 1908.	Admitted.	Discharged.	Died.	In Hospital Dec. 31st, 1909.
Scarlet Fever	10	116	104	1	21
Diphtheria	9	57	50	6	10
Diphtheria Contacts ...	3	4	7	—	—
Enteric Fever	—	1	1	—	—
Phthisis Pulmonalis ...	—	11	9	2	—
Doubtful	—	1	1	—	—
Totals	22	190	172	9	31

With regard to the "Isolation Home" for Diphtheria "Contacts," in view of the extremely limited use which now has to be made of the Home for "Contacts," and of the fact that the necessary room for such cases will be available in what is called the Enteric Fever block when the new Phthisis pavilion is erected, it has been decided to give up the "Home" altogether and to terminate the Council's tenancy of the premises in June next.

The hospital expenditure for a number of years back is given in the following table :—

	Salaries and Wages.	Food.	Drugs and Disinfectants	Other Items.	Total.
	£	£	£	£	£
1897—8	335	517	85	337	1274
1898—9	295	548	63	433	1339
1899—00	336	554	47	331	1268
1900—1	303	531	33	402	1269
1901—2	348	547	41	543	1479
1902—3	528	732	45	885	2060
1903—4	518	828	55	983	2384
1904—5	478	511	34	705	1728
1905—6	499	664	31	761	1955
1906—7	616	633	50	827	2126
1907—8	532	537	40	742	1851
1908—9	626	639	64	606	1935

The following table gives details as to the average cost of maintenance per patient, etc., for the past twelve years:—

Year.	Total treated.	Average daily number.	Average resid'nce in days.	Daily cost per head for Food.		Daily cost per head for Food and Drugs.		Cost per patient per day.		Average cost per patient.		
				s.	d.	s.	d.	s.	d.	£	s.	d.
1897–8	83	9·9	43·6	1	3½	1	9	7	0½	15	6	11¾
1898–9	121	14·0	42·3	1	1¾	1	4½	5	2½	11	1	3¾
1899–00	125	13·0	38·0	1	2½	1	5	5	4	10	2	10½
1900–1	127	16·5	47·4	1	0¼	1	1½	4	2½	9	19	10
1901–2	98	10·7	39·8	1	2	1	4½	7	6¾	15	1	10
1902–3	245	28·1	41·9		10½		11½	4	0	8	8	1¾
1903–4	269	31·1	42·4		11	1	0	4	2	8	17	2¾
1904–5	127	11·0	31·7		11½	1	1½	8	0¾	13	12	1½
1905–6	148	15·0	37·0	1	1¼	1	2½	7	1½	13	4	2½
1906–7	179	19·1	38·9		11¼	1	1	6	1	11	17	6½
1907–8	152	12·3	29·7		11½	1	1¾	8	2½	12	3	6½
1908–9	185	15·1	29·8	1	0¾	1	3½	7	0	10	9	2¼

The following table has been constructed to show the number of cases which have been admitted since the establishment of the Hospital, and the mortality which has occurred.

Year.	Small-pox.		Diphtheria.		Scarlet Fever.		Typhus Fever.		Typhoid Fever.		Erysipelas.		Measles.		Phthisis.		Other Diseases.		Total.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1886	2	...	1	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	5	...
1887	...	...	15	3	6	...	...	...	...	...	1	...	...	...	...	...	1	...	23	3
1888	...	...	2	...	2	...	...	...	...	...	1	...	1	...	...	...	...	...	6	...
1889	...	...	4	1	13	...	...	...	1	...	1	...	2	...	...	...	...	...	21	1
1890	...	...	5	1	15	1	...	...	...	...	1	1	...	...	...	...	...	...	21	3
1891	...	...	2	...	11	1	...	...	12	2	...	...	...	...	...	...	...	...	25	3
1892	3	...	1	...	27	...	1	...	1	...	...	...	3	...	...	...	...	...	36	...
1893	5	...	...	...	81	1	...	...	3	1	...	...	...	...	...	...	2	...	91	2
1894	1	...	2	1	65	2	...	...	...	...	...	...	...	...	...	...	...	...	68	3
1895	1	...	4	1	34	...	...	...	5	...	...	...	...	...	...	...	...	...	44	1
1896	1	...	2	...	62	4	...	...	4	1	...	...	...	...	...	...	...	...	69	5
1897	...	...	3	...	41	...	...	...	22	1	...	...	...	...	...	...	...	...	66	1
1898	...	...	11	2	76	...	...	...	11	4	1	...	2	...	...	...	...	...	101	6
1899	...	...	2	1	120	1	...	...	...	...	...	...	...	...	...	...	...	...	122	2
1900	...	...	...	...	118	1	...	..	1	...	...	...	...	...	...	...	...	...	119	1
1901	...	...	13	...	61	...	...	...	4	...	...	...	...	...	...	...	...	...	78	...
1902	...	*1	4	...	183	2	...	...	6	2	...	...	...	...	...	...	...	...	193	5
1903	...	...	39	7	248	5	...	...	...	...	...	...	...	...	...	...	...	...	287	12
1904	...	...	29	7	59	...	...	...	4	...	...	...	...	...	...	...	...	...	92	7
1905	...	...	53	16	98	2	....	...	2	...	...	...	...	...	...	...	...	...	153	18
1906	...	...	42	10	119	3	...	...	1	...	...	...	...	...	...	...	...	...	162	13
1907	...	...	36	3	64	...	...	...	1	..	...	...	1	...	...	...	25	...	127	3
1908	...	...	†89	6	32	...	...	...	2	...	...	...	...	...	15	2	2	...	140	8
1909	...	...	§60	6	116	1	...	...	1	...	...	...	...	...	11	2	1	...	190	9

† Including 7 "Contacts." § Including 4 "Contacts." * Admitted as a case of Scarlet Fever.

TABLE I.

For the Whole District of Cambride.

Table showing Vital Statistics for the year 1909 and the antecedent ten years.

Year.	Population estimated to Middle of each year.	Births.		Total Deaths Registered in the District.				Total Deaths in Public Institutions in the District.	Deaths of Non-residents registered in Public Institutions in the District.	Deaths of Residents registered in Public Institutions beyond the District.	Nett Deaths at all Ages belonging to the District.	
				under One Year of Age.		at all Ages.						
		Number.	Rate.*	Nnmber.	Rate per 1,000 Births registered.	Number.	Rate.*				Number.	Rate*
1	2	3	4	5	6	7	8	9	10	11	12	13
1899 ...	38416	869	22·6	122	140	587	15·2	148	58	16	545	14·1
1900 ...	38607	923	23·9	128	138	657	17·0	138	58	9	608	15·7
1901 ...	38732	794	20·5	107	134	577	14·8	145	59	9	527	13·6
1902 ...	38968	842	21·6	121	143	606	15·5	133	60	11	557	14·2
1903 ...	39157	884	22·5	99	111	578	14·7	142	56	19	541	13·8
1904 ...	39347	819	20·8	113	138	597	15·1	155	61	14	550	13·9
1905 ...	39540	891	22·5	71	79	588	14·8	167	70	13	531	13·4
1906 ...	39731	791	19·9	110	139	599	15·0	170	77	8	530	13·3
1907 ...	39924	816	20·4	74	90	585	14·6	155	78	10	517	12·9
1908 ...	40118	791	19·7	115	145	654	16·3	142	63	12	603	15·0
Averages for years 1899—1908.	39254	843	21·4	106	125	602	15·3	149	64	12	550	14·0
1909 ...	40313	854	21·1	75	87	597	14·8	192	68	19	548†	13·5

* Rates calculated per 1,000 of estimated population.

† This number includes five deaths of persons not belonging to the district, one in St. Andrew and Less Sub-District, and four in St. Andrew the Great Sub-District, owing to death having taken place elsewhere than in a Public Institution.

NOTE.—The deaths included in column 7 of this table are the whole of those registered during the year as having actually occurred within the district or division. The deaths included in Column 12 are the number in Column 7, corrected by the subtraction of the number in Column 10 and the addition of the number in Column 11.

By the term "Non-residents" is meant persons brought into the district on account of sickness or infirmity and dying in Public Institutions there; and by the term "Residents" is meant persons who have been taken out of the district on account of sickness or infirmity and have died in Public Institutions elsewhere.

The Public Institutions taken into account for the purposes of this and the following Tables are Addenbrooke's Hospital, Infectious Diseases Hospital, and Union Workhouse, Cambridge, H.M. Prison, Chesterton, and the County Asylum, Fulbourn, Cambs.

Area of District in Acres (exclusive of area covered by water).........3,210

Total population at all ages	38,379	At Census of 1901.
Number of inhabited houses	8,700	
Average number of persons per house...................	4·4	

TABLE II.
Cambridge District and its Divisions.

Table showing Estimated Population, Births, Corrected Deaths at all ages and Infant Mortality for the Year 1909 and the antecedent ten years.

Names of Localities	1 Whole District.				2 St. Andrew the Less.				3 St. Andrew the Great.			
Year.	Population estimated to middle of each year.	Births registered.	Deaths at all ages	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all ages	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all ages	Deaths under 1 year.
	a.	b.	c.	d.	a.	b.	c.	d.	a.	b.	c.	d.
1899.....	38416	869	545	118	Information not obtainable				Information not obtainable			
1900.....	38607	923	608	122	28281	778	442	106	10326	145	166	16
1901.....	38732	794	527	101	28519	681	387	90	10213	113	140	11
1902.....	38968	842	557	114	28814	697	408	94	10154	145	149	20
1903.....	39157	884	541	96	29105	736	414	78	10052	148	127	18
1904.....	39347	819	550	107	29399	702	418	91	9948	117	132	16
1905.....	39540	891	531	70	29697	752	392	58	9843	139	139	12
1906.....	39731	791	530	101	30066	660	412	80	9665	131	118	21
1907.....	39924	816	517	72	30300	702	395	62	9624	114	122	10
1908.....	40118	791	603	107	30606	672	457	92	9512	119	146	15
Averages for years 1898-1909	39254	842	550	100								
1909.....	40313	854	548	71	30916	724	406	57	9397	130	142	14

* This number includes five deaths of persons not belonging to the district, one in St. Andrew the Less Sub-District and four in St. Andrew the Great Sub-District, owing to death having taken place elsewhere than in a public institution.

Notes.—(*a*) The separate localities adopted for this table are areas of which the populations are obtainable from the census returns. Block 1 is used for the whole district, and blocks 2, and 3 for the several localities.

(*b*) Deaths of residents occurring in Public Institutions beyond the district are included in sub-columns *c* of this table, and those of non-residents registered in Public Institutions in the district are excluded.

(*c*) Deaths of residents occurring in Public Institutions, whether within or without the district, are allotted to the respective localities, according to addresses of the deceased.

***The information required by Note (*b*) and (*c*) is not obtainable for the sub-districts 2, and 3 for the year 1899.

TABLE III.

Cambridge District and its Divisions.

Cases of Infectious Disease notified during the Year 1909.

NOTIFIABLE DISEASE.	CASES NOTIFIED IN WHOLE DISTRICT.							TOTAL CASES NOTIFIED IN EACH LOCALITY.		NO. OF CASES REMOVED TO HOSPITAL FROM EACH LOCALITY.		Total cases removed to Hospital.
	At all Ages.	At Ages—Years.						1	2	1	2	
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards.	St. Andrew the Less.	St. Andrew the Great.	St. Andrew the Less.	St. Andrew the Great.	
Small-pox	...	...	...	...	...	...	...	...	...	...	...	...
Cholera	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria	59	..	18	30	8	3	...	36	23	29	18	57
Membranous Croup ...	...	...	...	...	...	...	...	...	...	...	...	...
Erysipelas	28	...	1	2	2	17	6	20	8	...	...	..
Scarlet Fever	121	2	17	74	18	10	...	111	10	102	9	117
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever	2	...	...	...	...	2	...	1	1	...	1	1
Relapsing Fever ..	...	...	...	...	...	...	...	...	...	...	...	...
Continued Fever ..	..	...	...	...	...	...	...	...	...	...	...	..
Puerperal Fever ...	...	...	...	...	...	..	...	...	...	...	...	...
Plague	...	...	...	...	...	...	...	...	...	...	...	...
* Phthisis	14	...	...	1	1	12	...	9	5	5	2	11
† ,, ...	17	...	...	...	...	14	3	13	4	2	1	
Totals...	241	2	36	107	29	58	9	190	51	138	21	186

NOTES.–The localities adopted for this table are the same as those in Tables II. and IV. *Voluntary. †P.H. (Tub.) Regls., 1908.

In addition to the Town cases there have been five cases of Scarlet Fever, three cases of Diphtheria, and one case of Phthisis belonging to the Chesterton Urban District; seven cases of Diphtheria and one case of Scarlet Fever belonging to the Chesterton Rural District, treated at the Infectious Diseases Hospital.

Besides those cases removed into the Borough Infectious Diseases Hospital four cases of Typhoid Fever belonging to different parts of the County were medically treated in Addenbrooke's Hospital.

The Borough Infectious Diseases Hospital is situated in the St. Andrew-the-Less Sub-District, and the Small-pox Hospital is situated in the Parish of Cherryhinton, in the Chesterton Rural District.

TABLE IV.

Cambridge District and its Divisions.

Causes of and ages at Death during the Year 1909.

Causes of Death.	Deaths in or belonging to the whole District at subjoined ages.							Deaths in or belonging to localities (at all ages).		Total Deaths in Public Institutions in the District.
	All ages.	Under 1.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	St. Andrew the Less.	St. Andrew the Great.	
1	2	3	4	5	6	7	8	9	10	11
Small-pox	...	...	...	...	...	...	...	..	...	...
Measles	1	...	...	1	...	...	...	1	...	1
Scarlet Fever	1	...	...	...	1	...	...	1	...	1
Whooping Cough	.	...	...	...	...	...	...	...	...	...
Diphtheria and Membranous Croup	7	...	4	2	1	...	...	4	3	6
Croup	...	...	...	...	...	...	...	...	...	...
Fever { Typhus	...	...	...	...	...	...	...	...	...	...
Fever { Enteric	...	...	...	...	...	...	...	...	...	...
Fever { Other continued ...	...	...	...	...	...	...	...	...	...	...
Epidemic Influenza ...	16	...	...	...	...	8	8	12	4	...
Cholera	...	...	...	...	...	...	...	...	...	...
Plague	...	...	...	...	...	...	...	...	...	...
Diarrhœa. (*See* notes) ...	15	5	3	...	...	...	7	13	2	11
Enteritis. (*See* notes) ...	1	...	1	...	...	...	...	1	...	...
Gastritis. (*See* notes) ...	4	3	..	...	...	1	...	4	...	...
Puerperal Fever	...	...	...	...	...	...	...	...	...	...
Erysipelas	1	...	...	...	...	...	1	1	...	...
Phthisis	33	...	...	...	7	22	4	23	10	9
Other tubercular diseases ...	15	3	2	2	1	7	..	10	5	8
Cancer, malignant disease...	54	...	..	...	...	27	27	42	12	20
Bronchitis	40	4	1	...	...	10	25	28	12	10
Pneumonia	29	4	4	1	1	11	8	23	6	4
Pleurisy	2	...	...	...	...	2	...	...	2	...
Other diseases of Respiratory organs	4	...	1	...	...	...	3	4	...	...
Alcoholism. Cirrhosis of liver	5	...	...	...	...	3	2	2	3	1
Venereal diseases	...	...	...	...	...	...	...	...	...	...
Premature birth	22	22	...	...	...	...	...	18	4	1
Diseases and accidents of Parturition	...	..	...	...	...	...	...	...	...	1
Heart diseases	53	...	...	1	4	17	31	42	11	9
Accidents	14	3	...	3	1	3	4	11	3	14
Suicides	4	...	...	...	...	4	...	1	3	1
Not certified...	2	1	...	...	...	...	1	2	...	...
All other causes	225	26	4	8	7	61	119	163	62	95
All causes	548*	71	20	18	23	176	240	406	142	192

See Notes on next page.

* This number includes five deaths of persons not belonging to the district, one in St. Andrew the Less Sub-District and four in St. Andrew the Great Sub-District, owing to death having taken place elsewhere than in a Public Institution.

NOTES TO TABLES IV. AND V.

(*a*) All deaths of " Residents " occurring in public institutions, whether within or without the district are *included* with the other deaths in the columns for the several age groups (Columns 2-8). They are also, in columns 9-10, *included* among the deaths in their respective " Localities " according to the previous addresses of the deceased as given by the Registrar. Deaths of " Non-residents " occurring in public institutions in the district are in like manner *excluded.*

(*b*) *See* notes on Table I. as to meaning of " Residents " and " Non-residents," and as to the "Public Institutions" taken into account for the purposes of these Tables.

(*c*) All deaths occurring in public institutions situated within the district whether of " Residents " or of " Non-residents," are, in addition to being dealt with as in note (*a*), entered in the last column of Table IV.

(*d*) Under the heading of " Diarrhœa," are included deaths registered as due to Epidemic diarrhæa, Epidemic enteritis, Infective enteritis, Zymotic enteritis, Summer diarrhœa, Dysentary, and Dysenteric diarrhœa, Choleraic diarrhœa, Cholera and Cholera Nostras.

Deaths from Diarrhœa secondary to some other well defined disease are included under the latter.

Deaths from Enteritis, Muco-Enteritis, Gastro-Enteritis, Gastritis in Tables IV. and V. are placed immediately below, but separately from those enumerated under the heading Diarrhœa as defined by the enumeration above.

(*e*) Under the headings of " Cancer " and " Puerperal fever " are included all registered deaths from causes comprised within these general terms. Thus : Under " Cancer " are included deaths from Cancer, Carcinoma, Malignant disease, Scirrhus, Epithelioma, Sarcoma, Villous tumour and Papilloma of bladder, Rodent ulcer. Under " Puerperal Fever " are included deaths from Pyæmia, Septicæmia, Sapræmia, Pelvic peritonitis, Peri- and Endo-Metritis occurring in the Puerperium.

(*f*) Under " Congenital Defects " in Table V. are included deaths from Atelectasis, Icterus neonatorum, Navel hæmorrhage, Malformations and Congenital hydrocephalus.

(*g*) Under " Tuberculous Meningitis " are included deaths from Acute hydrocephalus.

(*h*) Under " Other Tuberculous Diseases " are included deaths from Tuberculosis, Tuberculosis of bones, joints and other organs, Lupus and Scrofula.

(*i*) All deaths certified by registered Medical Practitioners and all Inquest cases are classed as " Certified " ; all other deaths are regarded as " Uncertified."

TABLE IVa.

CAMBRIDGE 1909.

Table showing Causes of Death at Different Age Periods during the Year.

Persons.—(Males and Females.)

CAUSES OF DEATH.	AGES AT DEATH.													
	All Ages.	Under 5 years.		5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 and upwards.
		0 to 1	1 to 5											
All Causes	548	71	20	10	8	10	13	22	34	40	80	105	89	46
A.—General Diseases ...	196	35	10	4	4	2	10	15	12	17	32	27	22	6
B.—Local Diseases... ..	247	21	10	4	3	7	3	4	18	22	45	59	38	13
C.—Other Specified Dis. ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
D.—Ill-defined Diseases ...	87	12	...	...	...	...	...	...	2	...	2	18	27	26
E.—Violent Deaths. ...	18	3	...	2	1	1	...	3	2	1	1	1	2	1
A.—General Diseases.														
Smallpox Vaccinated ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Not Vaccinated...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
No Statement ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cowpox...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chickenpox	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles	1	..	...	...	1	...	...	...	...	...	...	...	...	..
Epidemic Rose Rash	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	1	...	...	...	...	...	1	...	...	...	...	...	...	...
Typhus	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Plague	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Relapsing Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Influenza	16	...	...	...	...	...	...	...	1	1	6	5	1	2
Whooping Cough	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Mumps	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria and Memb : Croup	7	...	4	2	1	...	...	...	...	...	...	...	...	...
Cerebro-spinal Fever... ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Simple Cont : Fever... ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Asiatic Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Epidemic Diarrhœa	3	3	...	...	...	...	...	...	...	...	...	...	...	...
Diarrhœa	12	2	3	...	...	...	...	...	...	...	...	1	4	2
Dysentery	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Malarial Fever...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hydrophobia	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Glanders	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Anthrax	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tetanus	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Syphilis...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gonorrhœa, Strict : Urethra...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Septicæmia ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pyæmia	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Phlegmasia Dol :	...	..	...	...	...	...	...	...	...	...	...	...	...	...
Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Infective Endocarditis ...	1	...	...	...	...	...	...	...	...	1	...	...	...	...
Epidemic Pneumonia Pneumonic Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Erysipelas	1	...	...	...	...	...	...	...	...	...	...	...	1	...
Septicæmia (not puerp :) ...	3	...	...	...	1	...	1	...	...	1	...	..	..	...
Pyæmia (not puerp :) ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Phlegmon	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Phagedœna	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Septic Diseases... ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tubercular Phthisis	24	...	...	...	...	2	4	7	3	4	1	3	...	...
Phthisis...	9	...	...	...	...	...	1	2	2	1	2	1	...	...

TABLE IVa., 1909.—*Continued.*

CAUSES OF DEATH.	AGES AT DEATH.													
	All Ages.	Under 5 Years. 0 to 1	1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 and upwards.
A.—General Diseases— *continued.*														
Tubercular Meningitis	7	3	2	1	...	...	1	...	...	...	..	...	...	...
Tubercular Peritonitis	1	...	...	...	...	...	...	...	1	...	...	...	...	...
Tabes Mesenterica	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lupus	...	...	...	...	...	...	...	...	..	...	...	...	...	...
Tubercle of other organs	3	...	...	...	...	...	...	..	..	2	1	...	...	...
General Tuberculosis	4	...	...	...	1	..	...	2	...	1	...	...	...	...
Scrofula	..	...	...	...	...	...	...	...	..	...	...	...	...	...
Parasitic Diseases	1	...	...	...	...	...	...	...	1	...	...	...	...	...
Starvation	...	...	..	...	...	...	...	...	..	...	...	...	...	...
Scurvy	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Alcoholism, Delirium Tremens	...	...	...	...	...	...	...	...	...	..	...	...	...	...
Opium, Morphia Habit	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ptomaine Poisoning	...	...	...	...	...	...	...	...	...	...	...	..	..	...
Industrial Poisoning Lead	...	...	...	...	...	...	...	...	...	...	...	..	...	...
Phosphorus	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Arsenic, &c.	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rheum: Fever, Acute Rheum:	...	...	...	...	...	...	...	...	..	...	...	...	...	...
Rheumatism of Heart	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chronic Rheumatism	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rheum: Arthritis, Rheum: Gout	4	...	...	...	...	...	...	...	1	...	1	1	1	...
Gout	1	...	...	...	..	...	...	...	...	...	...	...	1	...
Carcinoma	23	...	...	...	...	...	...	1	1	1	7	5	7	1
Sarcoma	2	...	...	...	..	...	...	...	...	...	2	...	...	...
"*Cancer*," Malignant Disease	29	...	...	...	...	...	.	1	2	3	9	10	3	1
Rickets	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Purpura	1	...	...	...	...	...	1	...	...	...	...	...	...	...
Hæmophilia, Hæm: Diathesis	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Anæmia, Leucocythæmia	5	...	...	...	...	...	...	1	...	1	2	...	1	...
Diabetes Mellitus	9	...	...	1	...	...	1	1	...	1	1	1	3	...
Premature Birth	22	22	...	..	...	...	...	...	...	...	...	...	...	...
Congenital Defects	4	3	1	...	...	...	...	...	...	...	...	...	...	...
Injury at Birth	1	1	...	...	...	...	...	...	...	...	...	...	...	...
Atelectasis	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Want of Breast Milk	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Teething	1	1	...	...	...	...	...	...	...	...	...	...	...	...
B.—Local Diseases.														
1. NERVOUS SYSTEM.														
Inflammation of Brain	7	2	1	1	..	...	...	...	1	1	...	...	1	...
Softening of Brain	1	...	...	...	...	...	...	...	..	...	1	...	...	...
General Paraly: of Insane	2	...	...	...	...	...	...	...	...	2	...	...	...	...
Insanity (not puerperal)	4	...	...	...	...	...	...	..	1	1	...	1	...	1
Chorea	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Epilepsy	1	...	...	...	...	...	...	...	...	...	1	...	...	...
Convulsions	5	4	1	...	...	...	...	...	...	...	...	...	...	...
Laryngismus Stridulus	...	...	..	...	...	...	...	..	...	...	...	...	...	...
Locomotor Ataxy	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dis: of Spinal Cord	1	...	...	...	...	...	...	...	1	...	...	...	...	...
Neuritis	1	...	...	...	...	...	...	...	...	...	1	...	...	...
Brain Tumour	1	...	...	...	...	...	...	...	...	...	1	...	...	...
Nervous System (other Dis:)	3	...	...	...	...	...	...	...	...	1	1	1	...	...
2. DISEASES OF SPECIAL SENSE ORGANS.														
Otitis, Mastoid Disease	1	...	...	...	1	...	...	...	...	...	...	...	...	...
Epistaxis, Nose Disease	...	...	...	...	...	..	...	...	...	...	...	...	...	...
Ophthalmia, Eye Disease	...	...	...	...	...	...	...	...	...	...	...	...	...	...

TABLE IVa, 1909.—*Continued.*

CAUSE OF DEATHS.	AGES AT DEATH.													
	All Ages.	Under 5 Years.		5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 and upwards.
		0 to 1	1 to 5											
3. DISEASES OF HEART.														
Valvular Dis, Endocarditis ...	16	...	...	1	...	2	...	1	...	...	5	4	3	...
Pericarditis	. .	...	...	...	...	...	...	...	...	...	...	...	..	..
Hypertrophy of Heart ...	1	...	.	...	...	...	...	...	...	...	...	1	...	...
Angina Pectoris	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dilatation of Heart	1	...	...	...	...	...	...	...	...	...	...	1	...	...
Fatty degen : of Heart ...	2	...	...	...	...	...	...	...	...	...	...	1	...	1
Degeneration of Heart ...	1	...	...	...	...	...	...	...	1	...	..	...	...	...
Syncope, Heart Disease ...	32	...	...	...	...	2	...	...	3	2	5	11	7	2
4. DIS: OF BLOOD VESSELS.														
Cerebral Hæmorrhage ..	26	...	...	...	...	...	...	...	...	...	7	9	7	3
Apoplexy, Hemiplegia	9	1	...	...	...	...	...	...	...	1	3	3	1	...
Aneurism	3	...	1	...	...	...	...	...	...	2	...	...	...	..
Senile Gangrene	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Embolism, Thrombosis ...	1	...	...	...	...	...	...	...	1	...	...	...	...	...
Phlebitis	...	...	...	...	...	...	..	...	...	...	...	...	...	...
Varicose Veins...	..	...	...	...	...	...	...	...	...	...	...	...	...	...
Blood Vessels (other Diseases)	3	...	...	...	...	...	...	...	...	...	1	1	1	...
5 DIS. OF RESPIRATORY SYS.														
Laryngitis	1	...	1	...	...	...	...	...	...	...	...	...	...	...
Memb: Laryng: (not Diphth:)	...	...	..	...	...	...	...	...	...	...	...	...	...	...
Croup	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Larynx (other Dis:)	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bronchitis	40	4	1	...	...	...	...	...	1	2	7	11	10	4
Pneumonia { Lobar	2	...	1	...	...	1	...	...	...	...	...	...	..	...
Pneumonia { Broncho ...	10	2	2	...	...	...	...	...	1	...	2	...	2	1
"*Pneumonia*"	17	2	1	...	1	...	...	1	4	3	...	4	1	...
Emphysema, Asthma... ...	1	...	...	...	...	...	...	...	...	...	...	1	...	...
Pleurisy	2	...	...	...	...	...	...	...	...	1	1	...	...	...
Fibroid Disease of Lung ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Respiratory Dis: (Other) ...	2	...	...	...	...	...	...	...	...	...	...	1	1	...
6. DIS: OF DIGESTIVE SYS:														
Tonsilitis, Quinsy	1	...	...	1	...	...	...	...	...	...	...	...	...	...
Mouth, Pharynx	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gastric Ulcer	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gastric Catarrh	1	1	...	...	..	..	...	...	...	...	...	...	...	...
Stomach (Other Dis:) ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteritis	1	...	1	...	...	...	...	...	...	...	...	...	...	...
Gastro-Enteritis	4	3	...	...	...	...	..	...	...	...	1	...	...	...
Appendicitis, Perityph ...	3	...	...	...	...	1	1	...	1	...	...	...	...	...
Hernia	2	...	...	...	...	...	...	...	...	...	...	2	...	...
Intestinal Obstuction... ...	4	...	...	...	...	...	...	1	...	1	...	...	1	1
Other Diseases of Intestines ...	1	...	...	...	...	...	...	...	...	...	...	1	...	...
Peritonitis	2	...	...	1	...	1	...	...	...	...	...	...	...	...
Cirrhosis ot Liver	5	...	...	...	...	...	...	...	...	1	2	2	...	...
Liver and Gall Bladder (O.D.)	2	1	..	...	...	...	...	1	...	...	...	...	...	...
Digestive System (Other Dis:)	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7. DIS : OF LYMPHATIC AND DUCTLESS GLANDS.														
Spleen, Disease of	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lymphat: Syst: (Other Dis :)	1	...	...	...	...	...	1	...	...	...	...	...	...	...
Thyroid Body (Other Dis:) ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Supra Renal Caps: (Dis: of)..	1	...	...	...	...	...	...	...	1	...	...	...	...	...
8. DISEASE OF URINARY SYS :														
Nephritis Ac: Uræmia ...	5	...	...	...	1	...	1	...	1	...	1	...	1	...
Nephritis, Chronic	7	. .	...	...	...	...	...	...	...	2	2	1	2	...
Ch: Bright's Dis: Albumin:...	4	...	...	...	...	...	...	...	...	...	2	2	...	...
Calculus	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bladder and Prostate Dis: ...	3	...	...	...	...	...	...	...	1	1	...	1	...	...
Urinary Syst: (Other Dis:) ...	2	1	...	...	...	...	...	...	...	1	...	...	...	...

TABLE IVa., 1909.—*Continued.*

CAUSES OF DEATH.	AGES AT DEATH.													
	All Ages.	Under 5 Years.		5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 and upwards.
		0 to 1	1 to 5											
9. DISEASES OF GENERATIVE SYSTEM.														
Ovarian Tumour	1	...	...	...	...	...	...	...	...	...	1	...	...	...
Other Dis: of Ovary	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Uterine Tumour	..	...	...	...	...	...	...	...	..	..	...	...	...	...
Other Dis: of Uterus & Vagina	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Dis: of Menstruation ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gener: and Mam Orgs: (other)	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10. DISEASES OF PREGNANCY AND CHILDBIRTH.														
Abortion, Miscarriage ...	...	...	...	...	..	...	...	...	...	...	...	...	...	...
Puerperal Mania	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Convulsions ..	...	...	...	...	...	...	..	...	...	...	...	...	...	...
Placenta Præv: Flooding ...	..	...	...	...	...	...	...	..	...	...	...	...	...	...
Other Ac: of Preg: & Childbirth	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11. DISEASES OF LOCOMOTOR SYSTEM.														
Caries, Necrosis	...	...	...	...	...	...	...	...	...	...	...	...	.	...
Arthritis, Periostitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Locomotor Sys: (other) ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12. DISEASES OF THE SKIN.														
Ulcer, Bedsore	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Eczema	. .	...	...	...	...	...	...	...	...	...	...	...	...	...
Pemphigus	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Skin Diseases (other)	...	...	...	...	...	...	...	...	...	...	...	...	...	...
C.—Other Specified Diseases.	...	...	...	...	...	...	...	...	...	...	..	...	...	...
D.—Ill-defined and not Specified Diseases.														
Atrophy, Debility	10	10	...	...	...	...	...	...	...	...	...	...	...	...
Old Age...	71	...	...	...	...	. .	...	...	...	...	1	18	27	25
Dropsy, Ascites, Anasarca ...	1	...	...	...	...	...	...	. .	1	...	...	...	...	...
Tumour...	1	...	...	...	...	...	...	...	...	...	1	...	...	...
Abscess	...	...	...	...	...	...	...	...	...	...	...	...	. .	...
Hæmorrhage	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sudden (cause unascertained)..	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Ill-defined	4	2	...	...	..	...	...	...	1	...	...	..	...	1
E.—Violent Deaths.														
1. ACCIDENT.														
Burns and Scalds	3	...	...	2	...	...	...	...	...	...	...	...	1	...
Poison, Poisonous Vapours ...	3	...	...	...	...	...	...	1	...	...	...	1	...	1
Drowning	1	...	...	...	1	...	...	...	...	...	...	...	...	...
Suffocation	3	3	...	...	...	...	...	...	...	...	...	...	..	...
Falls	1	...	...	...	...	...	...	1	...	...	...	...	...	...
Weather Agencies	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Otherwise or not Stated ...	3	...	...	...	...	1	...	...	1	...	...	...	1	...
2. HOMICIDE.	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3. SUICIDE.	4	...	..	...	...	...	...	1	1	1	1	...	...	...
4. EXECUTION.	...	...	...	...	...	..	...	...	...	...	...	...	...	...

TABLE VI.

Cambridge District.

Comparison of Prevalence of Sickness and Death from Infectious Diseases corrected by the exclusion of "Non-Residents."

(Rates calculated per 1,000 persons, on the population estimated to the middle of each year.)

YEAR.	Small Pox.		Diphtheria, Membranous Croup.		Erysipelas.		Scarlet Fever.		Typhus Fever.		Enteric and Continued Fevers.		Puerperal Fever.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1899......	0·00	0·00	0·28	0·00	0·54	0·00	4·08	0·02	0·00	0·00	0·91	0·02	0·05	0·05
1900......	0·00	0·00	1·63	0·07	0·90	0·02	3·65	0·05	0·00	0·00	0·80	0·02	0·07	0·02
1901......	0·00	0·00	1·42	0·18	0·49	0·05	1·88	0·00	0·00	0·00	0·56	0·07	0·02	0·02
1902......	0·05	0·02	0·41	0·05	0·56	0·00	5·23	0·07	0·00	0·00	0·33	0.07	0·02	0·02
1903......	3·93	0·38	1·73	0·28	0·58	0·00	7·25	1·53	0·00	0·00	0·15	0·02	0·05	0·02
1904......	0·00	0·00	0·99	0·22	0·83	0·00	1·67	0·00	0·00	0·00	0·22	0·00	0·02	0·00
1905......	0·00	0·00	1·64	0·45	1·08	0·05	3·31	0·05	0·00	0·00	0·20	0·10	0·12	0·00
1906......	0·00	0·00	0·78	0·30	0·68	0·05	2·54	0·02	0·00	0·00	0·10	0·02	0·02	0·00
1907......	0·00	0·00	0·82	0·07	1·27	0·10	1·90	0·02	0·00	0·00	0·04	0·00	0·25	0·05
1908......	0·00	0·00	1·94	0·14	0·42	0·00	0·89	0·00	0·00	0·00	0·14	0·00	0·02	0·02
Average for years 1899—1908	0·34	0·04	1·17	0·18	0·74	0·02	3·23	0·04	0·00	0·00	0·34	0·03	0·06	0·02
1909....	0·00	0·00	1·46	0·17	0·69	0·02	3·00	0·02	0·00	0·00	0·05	0·00	0·00	0·00

TABLE V.

Cambridge District.

Infantile Mortality during the year 1909.

Deaths from stated Causes in Weeks and Months under one year of Age.

CAUSE OF DEATH.		Under 1 week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 1 Month.	1-2 Months.	2-3 Months.	3-4 Months.	4-5 Months.	5-6 Months.	6-7 Months.	7-8 Months.	8-9 Months.	9-10 Months.	10-11 Months.	11-12 Months.	Total Deaths under One Year.
All Causes.	Certified	21	3	1	5	30	10	5	2	3	4	1	3	4	3	...	5	70
	Uncertified	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
i. Common Infectious Diseases.	Small-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Chicken-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Measles	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Scarlet Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Diphtheria : Croup ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...
	Whooping Cough ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ii. Diarrhœal Diseases. (*See Note to* Table iv.)	Diarrhœa, all forms ...	...	...	...	...	...	1	2	...	1	1	...	...	...	...	...	...	5
	Enteritis Muco Enteritis Gastro Enteritis	...	...	...	...	...	...	1	...	...	1	...	...	1	...	...	...	3
	Gastritis, Gastro-intestinal Catarrh	...	...	..	...	...	...	1	...	...	...	...	...	...	...	...	...	1
iii. Wasting Diseases.	Premature Birth ..	13	1	...	2	16	5	1	...	...	...	...	...	...	...	...	...	22
	Congenital Defects ... *see notes* Table iv.	1	...	...	...	1	1	...	...	...	...	...	...	...	1	...	...	3
	Injury at Birth	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
	Want of Breast-milk ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Atrophy, Debility, Marasmus	2	2	1	1	6	1	...	.	1	1	...	1	...	...	...	...	10
iv. Tuberculous Diseases.	Tuberculous Meningitis. *see notes* Table iv.	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	1	3
	Tuberculous Peritonitis Tabes Mesenterica	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Other Tuberculous Diseases *see notes* Table iv.	...	...	...	...	...	..	...	...	...	...	...	..	...	...	...	...	...
v. Other Causes.	Erysipelas	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Syphilis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Rickets	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...
	Meningitis (*not Tuberculous*)	...	...	. .	...	...	...	...	...	...	...	...	...	1	1	...	...	2
	Convulsions	1	...	...	...	1	...	...	1	...	1	...	...	...	...	...	1	4
	Bronchitis	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	2	4
	Laryngitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Pneumonia	...	...	..	1	1	1	...	...	...	...	...	...	1	...	...	1	4
	Suffocation, overlaying..	2	...	...	...	2	1	...	...	...	...	...	...	...	...	...	...	3
	Other causes	2	...	...	1	3	...	...	1	1	...	...	1	...	...	...	...	6
		22	3	1	5	31	10	5	2	3	4	1	3	4	3	...	5	71

District (or sub-division) of Cambridge.

Population, estimated to middle of 1909, 40,313.

Births in the year { Legitimate, 805.
Illegitimate, 49.

Deaths in the year of { Legitimate Infants, 63.
Illegitimate Infants, 8.

Deaths from all Causes at all Ages, 548.

TABLE VII.

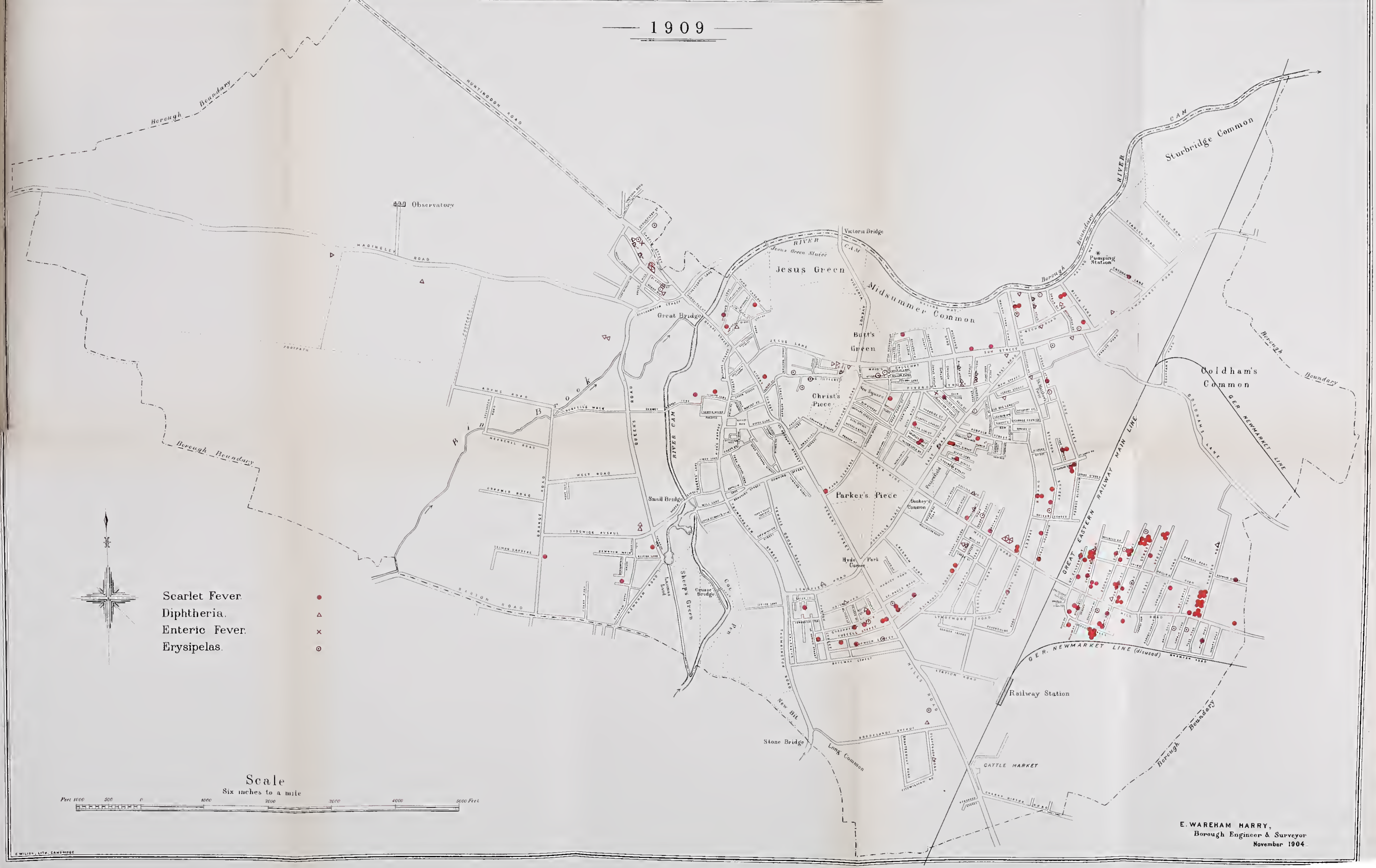
Cambridge District.

Report of the Sanitary Work Completed during the year 1909 by the Inspectors of Nuisances.

				Results of Inspections.			House Drains.					Waterclosets, Majority hand-flushed.			Dung Pits.		Miscellaneous.													
																					Regularly Inspected.									
INSPECTORS.	No. of Complaints received during the year.	No. of Houses, Premises, etc., Inspected.	No. of Re-inspections of Houses, Premises, etc.	Orders issued for Sanitary Amendments of Houses, and Premises.	Houses, Premises, &c., Cleansed, Repaired, Whitewashed, &c.	Houses provided with additional Water supply.	Tile Drains removed and Glazed Pipes substituted.	Drains re-constructed.	Repaired, Cleansed, Trapped, etc.	Ventilated.	Waste Pipes connected with Drains, etc., abolished.	Repaired, etc.	Supplied with Water.	New provided.	New provided.	Repaired, Covered, etc.	Unwholesome Houses reported.	Overcrowding.	Removal of Accumulations of Dung, Stagnant Water, Animal and other Refuse.	Animals Removed, being improperly kept.	Bakehouses.	Workshops.	Common Lodging Houses.	Licensed Cowsheds, 31.	Dairies and Milkshops, 74.	Licensed Slaughter houses, 25.	Canal Boats.	Caravans.	Legal Prod's: i.e. Summonses.	Samples of Water taken for Analysis.
1	135	402	372	122	71	24	25	97	52	41	6	121	89	14	2	1	40	7	18	...	37	23	...	43	47	218	1	136	16	1
2	179	440	579	193	94	30	12	96	133	38	14	161	113	2	...	4	19	4	26	...	43	51	120	89	58	135	...	38	...	...
Totals	314	842	951	315	165	54	37	193	185	79	20	282	202	16	2	5	59	11	44	...	80	74	120	132	105	353	1	174	16	1

BOROUGH OF CAMBRIDGE

1909



ANNUAL REPORT

OF THE

SCHOOL MEDICAL OFFICER

ON THE

MEDICAL INSPECTION OF ELEMENTARY SCHOOL CHILDREN,

during the year ended 31st December, 1909.

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Extract from Circular 596 of the Board of Education relating to the Annual Report of the School Medical Officer.

"5. The Annual Report.........should be made by the School Medical Officer to the Local Education Authority, who will send two copies of it to the Board of Education, with any observations which they may desire to submit, as soon as practicable after the expiration of the year to which it relates. It will be understood that Reports which are for the information of the Board of Education may well include statements of local circumstances and conditions which would be superfluous if they were intended only for the information of the Local Authority. The Annual Report should relate to the calendar year............

6. As regards the scope of the Report, the Board consider that it is desirable that it should deal with the whole subject of School Hygiene, and should cover as much as possible of the ground indicated under the following heads. It is recognised that these heads suggest a degree of comprehensiveness which in many, and indeed in most cases, will not immediately be attainable. The Board have, however, considered it desirable to treat the plan of the Annual Report in such detail as to furnish Local Education Authorities with a standard, by reference to which they may regulate their arrrangements for collecting and digesting the information which the work of the next few years will place at their disposal

(a) General review of the hygienic conditions prevalent in the schools in the area of the Local Education Authority in respect of such matters as surroundings, ventilation, lighting, warming, equipment, and sanitation, including observations of the type and condition of sanitary conveniences and lavatories, water supply for washing and drinking purposes, and cleanliness of schoolrooms and cloakrooms, arrangements for drying children's cloaks and boots, and the relation of the general arrangements of the School to the health of the children.

(b) General description of the arrangements which have been made for the co-relation of the School Medical Service with the Public Health Service and for the organisation and supervision of Medical inspection, and an account of the methods of inspection adopted, including:—

(i.) A statement of the extent (if any) to which the Board's Schedule of Medical Inspection has not been followed and the reason for such departure ;

(ii.) A statement showing the assistance given to the School Medical Officer and his assistants by nurses, managers of schools, teachers, attendance officers, and other persons.

(iii.) A statement showing the methods adopted for securing the presence of parents at the inspection and their co-operation in the subsequent treatment of defects, together with a review of the effect of such methods.

(iv.) The extent to which disturbance of school arrangements was involved by the inspection *(Art. 43 (b) and 44 (h) of Code, 1908).*

(c) General statement of the extent and scope of the medical inspection carried out during the year, including :—

(i.) The number of visits paid to schools and departments.

(ii.) The principle on which children have been selected for inspection ; (at entrance, before leaving, by selection according to ages or otherwise).

(iii.) The number of children inspected (classified for age at date of inspection and for sex).

(iv.) The number of children referred for subsequent or further examination.

(v.) The number of children in respect of whom directions were given for treatment of defects, including a classified statement of such defects.

(vi.) The average time per head occupied by inspection.

(*d*) General review of the facts disclosed by medical inspection, under the headings contained in the Schedule to Circular 582, including tables showing the height and weight of children inspected (according to the age at date of inspection and sex).

(*e*) General review of the relation of home circumstances and social and industrial conditions to the health and physical condition of the children inspected, so far as facts bearing on this point have come under notice.

(*f*) Review of the methods employed or available for the treatment of defects, such as defective eyesight, carious teeth, nasal obstruction or adenoids, tonsilitis, discharging ears, pediculosis, ringworm, and other skin diseases, including an account of the action of school nurses in obtaining or assisting in the treatment of such defects.

(*g*) Review of action taken to detect and prevent the spread of infectious diseases, including reference to action taken under Articles 45 (b), 53 (b) and 57 of the Code of 1908.

(*h*) Review of methods and the adequacy of such methods for dealing with blind, deaf, mentally or physically defective and epileptic children under the Acts of 1893 and 1899.

(*i*) Review of :—

(i) The methods and results of instruction in personal hygiene and temperance in the Public Elementary Schools in the area.

(ii.) The methods and results of physical or breathing exercises in the schools.

(iii.) Arrangements for open-air schools, school camps, etc., under Article 44 (g) of the Code of 1908.

(*j*) Account of miscellaneous work such as the examination of scholarship candidates, pupil teachers, or teachers of any grade."

Report of the School Medical Officer for the Year Ended 31st December, 1909.

The general plan of the report is that suggested by the Board of Education in circular 596, and is similar to that of last year.

The average number of children on the school registers during the year was 6799, and the average number in attendance 5942.

These were distributed among 32 schools or departments as follows :—-

School.	Average No. on Books.	Average Attendance.
Brunswick C. (Boys)	288	268
„ (Girls)	261	240
„ (Infants)	200	172
Barnwell East Road (Boys)	256	232
„ „ (Girls)	245	211
„ „ (Infants)	233	207
Barnwell Abbey (Mixed)	166	153
„ „ (Infants)	113	99
Higher Grade (Boys)	379	342
„ Eden Street (Girls and Infants)	271	238
King Street (Girls and Infants)	176	153
Newnham (Mixed and Infants)	160	137
New Street (Mixed)...	300	262
„ (Infants)	155	123
Occupation Road (Infants)	122	102
Park Street H.G. (Girls and Infants) ...	153	124
Romsey Council (Mixed)	461	415
St. Barnabas (Girls and Infants)	200	179

School.	Average No. on Books.	Average Attendance.
St. Giles' (Girls)	140	116
„ (Infants)	131	115
St. Matthew's York Street (Boys)... ...	170	157
„ Sturton Street (Infants) ...	122	99
Norfolk Street (Girls)	113	105
„ (Infants)	187	152
St. Paul's (Boys)	206	181
„ (Girls)	189	163
„ (Infants)	141	124
St. Peter's (Boys)	151	138
St. Philip's (Boys)	369	321
„ (Girls)	291	253
„ (Infants...	339	266
Union Road, Roman Catholic (Mixed & Inf.)	111	95
Total ...	6799	5942

(a) Hygienic condition of Schools.

The drainage arrangements of the schools were all tested and put into a satisfactory condition several years ago, and every year since minor alterations and improvements have been made in many of the schools.

Most of the buildings were erected at a time when the requirements for schools were neither so well understood nor exacting as they are now, and it must be admitted that in many respects they are capable of considerable improvement. Viewed as object lessons for the scholars they also in many respects fall short of the ideal. It is hoped that when time permits of the necessary inspections being made that the work required may be undertaken in stages in order that the expenditure may be spread over a number of years.

For two or three years the floors of most of the schools have been treated with "Florigene" with satisfactory results. The condition of many of the unpaved playgrounds makes it, however, a matter of great difficulty to keep the floors as clean and free from dust as they should be, and must add greatly to the work of the caretakers.

(b) Co-relation of the School Medical Service with the Public Health Service, including (i.) use of the Board's schedule; (ii.) assistance given by the Nurses, Managers, Teachers, Attendance Officers or other persons; (iii.) Co-operation of Parents; (iv.) disturbance of school arrangements.

The Medical Officer of Health is also the School Medical Officer, so that no difficulty has ever arisen and the arrangements made for carrying on the work of a school medical service have worked with perfect smoothness.

(i.) The Board's schedule of Medical Inspection has, with trifling alterations, and the addition of spaces for recording the chest measurement and vaccination marks, been adopted.

(ii.) The Medical Officer is assisted at his inspections by:—

(1) The School Nurse, who undertakes chiefly testing vision and hearing and also assists in other directions.

(2) The three Lady Health Visitors of the League of Physical Education and Improvement. One of the Health Visitors assists at the inspection of all girls and infants, testing vision and

hearing, and recording height and weight. The work done by the Visitors at the schools, and also in connection with visiting the homes, has proved of such service that the Local Education Authority have made arrangements with the League in order that their services may be always available and have agreed to contribute to the League a sum of £20 per annum from October, 1909, towards their salaries.

(3) A clerk is also present at the inspections to record the results on the inspection cards.

(4) Much help has also been given by the school teachers in undressing and dressing young children and preparing them for inspection.

(5) The arrangements made for dental inspection are entirely independent of the ordinary medical inspection and are dealt with by Mr. Gant in his Annual Report upon the work of the Dental Institute.

(iii.) Intimation of the date and time of inspection and an invitation to attend are given to parents on the printed form issued to them, on which they are requested to furnish information regarding the previous history of their children. Forty-nine parents attended at the inspection of their children, the largest number present at any school being eight ; as a rule there are only two or three, chiefly in the infant schools. At the girls' and boys' schools parents seldom attend. There is a general concensus of opinion among the teachers, and I am inclined to agree with it, that the result of issuing invitations to parents has been the withdrawal of children from attendance at the time of inspection or a refusal to permit inspection, and that the more careless parents adopt this as a means of avoiding any further trouble. The parent whose objection to medical inspection is based upon a misconception of its objects may perhaps in time allow her child to be inspected, but the careless parent who finds that a simple refusal to have her child inspected relieves her of any further trouble will only become confirmed in the apparent wisdom of the proceeding.

Under Section 122 of the Children Act, 1908, authority is given for the compulsory examination of the person and clothing of any child. This section is obviously intended to benefit not only the cleanly child but the dirty child also. There can be no logical objection to an extension, and our experience in Cambridge would point to the need for early extension, of such compulsory power of examination to all other conditions affecting the child's physical welfare.

(iv.) The inspections have all been made during school hours and with the exceptions of the St. Philip's Boys' and Girls', and the Abbey Mixed and Infants' schools, on school premises. The children from the St. Philip's schools were inspected in the Tracey Memorial Hall, which is only a few hundred yards from the school premises, and the Abbey School children in the Parish Room which is situated in the playground of the school.

The disturbance of school arrangements even when the inspections could not be made on school premises, was not very great. With regard to the accommodation available for the work of inspection, there is (with only three exceptions) none apart from schoolrooms. In the very few instances were there is a head teacher's room this is generally too small. The usual arrangement is to have a class room or part of one cleared out for the purpose. This as a rule has proved fairly satisfactory, but occasionally the noise of teaching going on in the same apartment or scholars playing outside is very disturbing. It is undesirable also that parents should be present at the undressing and inspection of the children of other people.

In view of this almost entire absence of any really suitable accommodation for work which is certain to be considerably extended in the future, it is extremely desirable that in planning new school buildings some provision should be made for medical inspection. The room should be in such a position as to be away from the hum and noise of school work or play, it should be sufficiently long (not less than 20 feet) to allow of vision testing, and there should also be a separate waiting room for parents.

(c) General statement of the scope and extent of medical inspection :—

(i.) The number of visits paid to the schools was 45; the highest number to any one school was 3.

(ii.) The groups of children selected for inspection (excluding the inspections made by the Dentist) were :—

(a) Those entering school for the first time.

(b) Those in their last year at school.

(c) Children presented for inspection by their teachers on account of some defect.

In addition the opportunity was taken while visiting the school to inspect children under the supervision of the School Nurse on account of ringworm, and many of the children who had been provided with spectacles as a result of former inspections.

A special inspection was also made of 49 children who were supposed to be backward or mentally deficient.

(ii.) The number of children inspected, classified according to age and sex, is shown in the following table. The number of children who were absent or whose parents objected to inspection is shown in the tabular statement opposite page 108.

Age.	3	4	5	6	7	8	9	10	11	12	13	14	15	Total No. Examined.
Boys	30	46	126	54	10	1	—	—	1	132	149	26	1	576
Girls	28	41	142	14	1	8	5	2	10	109	85	3	1	452
Totals	58	87	268	68	14	9	5	2	11	241	234	29	2	1028

In addition to those routine inspections, considerably over a thousand special inspections were made during the year.

(iv.) In only three or four instances was it thought necessary to re-inspect children. This was done at the Guildhall, the children being brought by their mothers.

(v.) Defects or conditions requiring treatment. These and also the number treated during 1909 are shown in the next table. A number of children treated in the current year are not included.

Defects found.	Number advised to have treatment.	Number treated by end of 1909.	
		Addenbrooke's Hospital.	Otherwise.
Enlarged Tonsils	90	25	3
Adenoids ...	2	1	1
Defective Vision	81	42	12
Skin Diseases ...	11	...	11
Verminous Heads	165	...	165

(vi.) The average time per head occupied by inspection was six minutes.

(d) General review of the facts disclosed by inspection.

Antropometric Measurements. The following tables show the average height, weight, and girth of the children examined, and for the purposes of comparison the Anthropometric Committee's standard average is also given. The height is taken without shoes, and the weight in the case of boys with only shirt and trousers and stockings on. In the case of girls the weight is recorded with all clothing on except boots. The chest measurement is taken just before the end of expiration during quiet breathing.

BOYS. (Height and Weight).

Years.	No. Examined.	Average Height.		Anthropometric Committee's Standard Average. ins.	Average Weight.		Anthropometric Committee's Standard Average. lbs.
		Inches.	Centimetres.		Pounds.	Kilograms.	
3	30	36·5	92·6	...	33·2	15·0	...
4	46	38·6	98·0	...	34·8	15·7	...
5	126	40·5	102·8	41·0	38·9	17·6	39·9
6	54	42·9	108·9	44·0	43·9	19·9	44·4
7	10	43·0	109·2	45·9	41·6	18·8	49·7
8	1	45·0	114·3	47·0	43·1	19·5	54·9
11	1	53·2	135·1	53·5	66·5	30·1	72·0
12	132	54·7	138·9	54·9	69·8	31·6	76·7
13	149	56·2	142·7	56·9	75·8	34·3	82·6
14	26	59·0	149·8	59·3	85·5	38·7	95·0
15	1	58·5	148·6	62·2	80·2	36·3	102·7

GIRLS. (Height and Weight.)

Years.	No. Examined.	Average Height.		Anthropometric Committee's Standard Average. ins.	Average Weight.		Anthropometric Committee's Standard Average. lbs.
		Inches.	Centmetres.		Pounds.	Kilograms.	
3	28	35·2	89·4	...	30·9	14·2	...
4	41	38·2	97·0	...	35·1	15·9	...
5	142	40·5	102·8	40·5	38·2	17·3	39·2
6	14	42·6	108·2	42·8	40·9	18·5	41·7
7	4	44·2	112·2	44·4	46·2	20·9	47·5
8	8	46·6	118·4	46·6	50·3	22·8	52·1
9	5	48·8	123·9	48·7	51·0	23·1	55·5
10	2	54·5	138·4	51·1	74·2	33·6	62·0
11	10	55·0	139·7	53·1	67·8	30·7	68·1
12	109	55·2	140·2	55·6	73·4	33·2	76·4
13	85	56·6	143·7	57·7	79·0	35·8	87·2
14	3	60·3	153·3	59·8	95·7	40·7	96·7
15	1	59·2	150·3	60·9	123·2	55·2	...

TABULAR STATEMENT SHOWING THE RESULTS OF THE INSPECTIONS IN EACH SCHOOL.

	School.	Number Examined.	Number not Examined.		Pediculosis, etc.		Tonsils.		Adenoids.	Enlarged Glands.		External Eye Disease.	Defective Vision.	Discharging Ears.	Defective Hearing.	Diseases of Heart.	Anæmia, etc.	Diseases of Lungs.	Diseases of Nervous System.	Rickets.	Deformities.	Spinal Disease.	Skin Diseases.	Number of Children in whom no defects were discovered.
			Absent.	Objected	Head	Body.	Much Enlarged	Enlarged		Sub Maxillary.	Cervical													
Infant Boys.	East Road...	26		.	5	5	1	7		1	9	.	..	...	...	1	...	2	...	...	2	...	1	6
	New Street	15	1		8	7		5			9		..	...	...	...	...	1	...	...	3	...	...	..
	Occupation Road	9	1	1	2	2	2	1		.	2		...	..	...	...	..	..	...	...	1	...	...	2
	Barnwell Abbey ..	13		.	..	1	.	...		.	4		.	..	...	..	..	..	...	...	2	...	..	8
	Brunswick Council	31	3	1	1	1	1	8	.		2	1	.	1	...	...	1	..	...	...	8	...	...	14
	Union Rd. Roman Catholic	2	..	.	1	1	.	1		-	2	.	..	..	..	...	...	...	...	...	1	..	1	...
	St. Philip's	73	2		...	5	9	13	1	1	21	3	10	1	1	2	3	2	...	...	8	...	3	27
	St. Giles	13	1	1	2	3		2	.	..	2		...	.	..	...	...	1	...	...	5	..	..	5
	Newnham	7	6	4	.	1	1	1	.	.	1	..	...	...	...	...	...	...	...	...	...	...	..	3
	King Street	8	1	2	...	3		2		...	5	1	1	..	...	..	...	...	...	...	3	..		3
	St. Paul's	18	1	8	1	7	2	4		1	4		.	1	...	..	...	1	...	1	3	...	.	4
	Park Street	3	.	3	.			..		..	1	.		...	...	..	..	..	...	..	...	...	.	2
	Eden Street	12		1	.	.	3	2		.	1		.	.	...	..	..	...	...	..	...	..	-	6
	St. Barnabas	4		1	.	..	.	1		..	3	.	.	..	...	..	..	...	...	..	...	..		1
	Sturton Street	8	2	2	..	2	.	2			3	1	...	...	...	.	...	1	...	...	1	-		4
	St. Matthew's	25	4	3		3	2	5			6	2	...	1	...	...	...	1	...	...	1	...	.	9
	Total	267	22	27	20	41	21	54	1	3	75	8	11	4	1	3	4	9	..	1	38	...	5	94
Infant Girls.	East Road	30	.		23	7	4	5	1	.	14	1		..	1	..		...	...	...	2	...		2
	New Street	10	2		10	3	..	3			1	2	.	..	..	..	.	1	..	...	2	..	.	...
	Occupation Road	8	2	1	4	1	1	1			2				...	...	.	...	...	...	...	...		2
	Barnwell Abbey ..	14	1	2	4	4	..	.			1	1			.	1	.	1	..	...	1	...	1	4
	Brunswick Council	27	3	1	3	1	2	4			8				..	.	.	3	...	...	5	...	..	6
	Union Rd. Roman Catholic	4		..	..	1		1	.		1		..		...	..	..	...	...	...	...	..	.	3
	St. Philip's ...	11	8	.	2	..	1	..		.	4	1			.	...	.	...	...	...	...	.	.	5
	St. Giles ...	20	1		10	6	1	3	.	...	7	..			...	...	..	1	...	..	4	..	.	3
	Newnham	10	1	8	1	2		...	...		1	.			...	...		..	...	...	...	.	...	7
	King Street	4	5	2	..	3		...	.		1		..		..	..	.	...	...	...	...		..	1
	St. Paul's ..	22	5	2	7	8	.	4	.		10		.	1	...	.	.	...	...	..	...	..	1	5
	Park Street	9	1	5	.			1			2		1	...	...		.	...	.	...	1	...	..	5
	Eden Street	9		3		1	1	2	..	.	2		.	...	...	1	...	.	...	...	...	...		4
	St. Barnabas	14		5	..	.	1	2			4			...	1	...	...	.	...	..	..	.	.	8
	Sturton Street	14	2	6	2	.	3	...		-	7	1	1	2	...	...	...	...	...	...	1	.		4
	St. Matthew's ..	23	4	2	4	4	2	7	...		5	...	1	1	...	..	...	1	...	...	...	...	.	8
	Total	229	35	37	70	41	16	33	1	..	70	6	3	4	2	2	...	7	..	..	16	..	2	67
Boys.	St. Philip's	20	6	4		1		7		.	4	1	1		3		...	..	.		1	.		7
	East Road	39	1	2		16	3	14		1	16	2	4	1	...	...	3	1	.	...	7	.		4
	New Street	17	3	1		8	2	3	...	1	5	.	1	...	...	.	1	1		...	4	..		3
	Barnwell Abbey	4	.	.	.		.	1	.	.	1		1	...	...	..	...	...	...	...	1	..		1
	York Street	21	3	6		.	2	5	.	.	9	.	2	..	...	...	...	...	...	..	5	.		7
	Brunswick Council	47	4	4	1	3	6	14	.	1	12	1	4	..	1	1	..	..	...	.	12	...	2	13
	Union Rd. Roman Catholic	1	...	...	.	...	1	..	..	.	.	.	...	...	...	...	...	...	...	...	...	...	..	..
	St. Peter's..	19	4	8	1	6	1	8		1	4		2	...	...	...	.	...	...	...	4	...	...	4
	St. Paul's ...	22	6	10	.	2	1	4		3	4		7	..	...	...		..	...	...	6	...	...	6
	Higher Grade	98	5	16		.	10	18		.	19	5	8	...	2	...	..	...	...	...	34	...	..	34
	Romsey Council ...	21	..	1	...	..	3	10	..	...	7	...	1	...	1	...	..	...	...	...	2	...	..	5
	Total ...	309	32	52	2	36	29	84	..	7	81	9	31	1	7	1	4	2	...	...	76	...	2	84
Girls.	New Street	25		1	20	6	4	7			6	1	4	..	.	..	..	...	...	...	...	...	..	1
	Barnwell Abbey ..	2		...	1	.							...	...	..		...	...	...	...	...	...	..	1
	Brunswick Council	10	2	31	...		4	1			2		2	...	..	.	..	...	...	...	1	...	...	3
	East Road ...	43	8	1	17	7	4	11			7		5	.	3	..		...	...	...	3	..	1	8
	Union Rd. Roman Catholic	3	.	1	3	..		.	.	.	.	1	1		1		.	...	..	...	...	..	..	..
	St. Giles ...	10	10	15	5	4	1	4	..	.	4	...	3	..	1	..	.	...	...	...	3	..	..	2
	Newnham ...	5	...	10	2	1		1	.		..	.	..	..	...	...	..	...	...	...	..	..	.	...
	King Street ...	12	...	2	4	1		4			2	2	.		..	.	..	...	...	...	...	...	..	4
	St. Paul's ..	7		4	6	5	1	4			3		1	.	..	.		...	...	...	...	...	...	...
	Park Street	8	1	10	5	.	1	3			1	2	2	.	...	.	..	...	...	...	...	...	...	1
	Eden Street ..	36	.	37	1	..	4	8			4	.	5	2	1	.	.	...	...	...	...	...	1	15
	St. Barnabas	13	4	29	1		1	3			3	2	6	...	.	..	...	...	...	...	...	...	...	4
	St. Matthew's	9		4	.		.	1			1	..	1	...	..	.	..	...	...	...	...	...	...	7
	Romsey Council ..	16	1	11	6	3	2	2				1	1	...	...	..	1	...	...	...	1	...	...	6
	St. Philip's	24	2	.	2	1	2	5	..	..	.	.	5	1	1	...	1	...	..	..	1	...	...	15
	Total ...	223	28	156	73	28	24	54		..	33	9	36	3	7	..	2	...	...	.	9	...	2	67
	Total for all Schools	1028	117	272	165	146	90	225	2	10	259	32	81	12	17	6	10	18		1	139	..	11	312
	Percentages.		8·2	19·2	16·1	14·2	8·7	21·8	0·2	0·9	25·1	3·1	13·2	1·1	1·7	0·6	0·9	1·75	...	0·1	13·5	...	1·0	30·3

BOYS AND GIRLS. (Chest Measurement.)

Years.	Boys.			Girls.		
	No. Examined.	Inches.	Centimetres.	No. Examined.	Inches.	Centimetres.
3	30	20·3	51·5	26	20·0	50·8
4	46	20·8	52·8	41	20·4	51·8
5	125	21·4	54·3	142	20·9	53·1
6	53	22·3	56·6	14	21·4	54·3
7	10	22·1	56·1	4	22·1	56·1
8	1	23·2	58·9	8	22·5	57·1
9	...	...	...	5	22·8	57·9
10	...	...	...	2	25·7	65·3
11	1	25·2	64·0	10	25·1	63·8
12	131	26·2	66·5	109	26·1	66·3
13	148	26·8	68·0	85	26·8	68·0
14	26	28·1	71·3	3	28·6	72·6
15	1	26·7	67·8	1	33·0	83·8

Speech: The information under this heading was supplied by the teachers. The total number reported to have some defect, such as defective articulation, lisps, stammering, is 78. Of these 14 are stammerers.

Nutrition: The children are classified as above average, average, or below average, an opinion being based upon the general appearance, complexion, colour of mucous membranes, and according as they were stout, average or thin.

The results are as follows:—

Above average ...	153	or 15	per cent.
Average	680	,, 67	,,
Below average ...	185	,, 18	,,

Clothing and Footgear: These have been classified according as they served the purposes of protection and warmth. 48 children (or 5 per cent.) were badly or insufficiently clothed, and 21 (or 2 per cent.) insufficiently shod. Only two children were found without boots.

Cleanliness : A rapid inspection of the head of every child was made with a view to detecting the presence or absence of nits or lice. Owing to the rapidity of the inspection and frequently the bad light, and to the fact that children with only a few nits on the hair were not included, the figures given represent a minimum. The general cleanliness and presence or absence of vermin (chiefly fleas) on the body were also noted at the same time.

Of the girls 31 per cent. were found to have dirty heads, and 15 per cent. to be otherwise dirty. The proportion varied considerably in different schools. 30 per cent. of the infant girls and 33 per cent. of the older girls had dirty heads.

Of the boys 4 per cent. had dirty heads, and 13 per cent. were otherwise dirty. The dirty heads were almost entirely confined to the infant boys.

Tonsillar enlargement and Adenoids : 28 per cent. of the girls and 30 per cent. of the boys were found to have enlarged tonsils.

The proportion considered to require treatment was :—

Girls —	Tonsils	10·8	per cent.	Adenoids	0	per cent.
Boys	,,	9·3	,,	,,	0	,,
Infant Girls	,,	7·0	,,	,,	0·5	,,
Infant Boys	,,	7·8	,,	,,	0·5	,,

Glandular Enlargements caused generally by tonsilitis, bad teeth, and irritation of the scalp were found in 23 per cent. of the girls, and 29 per cent. of the boys. Some may possibly be tubercular in origin, but treatment of the exciting cause (where it was discovered) was recommended in all cases.

Eye Disease and Vision: The external diseases of the eye found were:—

Ciliary Blepharitis	13
Squints	6
Corneal Opacities	1
Conjunctivitis	6
Ptosis	1

The vision was tested by means of Snellen's test types, and children with vision of $\frac{6}{12}$ or less were recommended for further medical examination by their own doctor.

The percentage of girls whose vision was $\frac{6}{12}$ or less is 16·1 and of boys 10·0.

The vision of children under six years of age was not tested unless there was some special reason for doing so. Four infant girls and eleven infant boys with defective vision were examined and found to require attention.

Hearing and Ear Disease: The hearing was tested by means of a stop watch, which could be readily heard by anyone with normal hearing at a distance of two feet. Seventeen children or 3·4 per cent. were found to have defective hearing. Twelve children

(1·1 per cent.) had disease of the ear associated with discharge. The hearing of children under six years of age was not tested.

Diseases of Heart: Seven children (0·7 per cent.) had cardiac murmurs due either to valvular disease of the heart or functional in character. Ten children (1·0 per cent.) were distinctly anæmic.

Diseases of the Lungs: Nineteen cases (1·8 per cent.) of pulmonary disease, chiefly bronchitis, were detected. One case of suspected tubercular disease was discovered.

Diseases of the Nervous System: No disease of the nervous system was met with.

Rickets: One child only showed evidence of rickets.

Deformities: One hundred and thirty-nine children (13·5 per cent.) presented some deformity, the most important being lateral curvature of the spine (66 cases.) As recorded in last year's report a number of children were found to have some degree of lateral curvature of the spine. During the year 1909 special inspections of nearly a thousand boys were made in order to discover to what extent the condition was prevalent, its causes, and also whether anything could be done to prevent or remedy the condition. At one of the schools (St. Philip's Boys') Professor Howard Marsh kindly undertook the inspection.

The results obtained have been tabulated for convenience of comparison ;—

School.	Ages.									Total Examined.	% with L.C.	Lighting.	Desks.
	6	7	8	9	10	11	12	13	14				
Brunswick Council	...	8	5	7	5	7	7	6	2	281	16·7	Good	Modern
Romsey Council...	...	...	1	3	5	4	3	5	...	128	16·4	Good	Modern
East Road ...	...	...	1	4	1	6	3	2	...	223	7·6	Fair	Old
St. Paul's	...	1	...	3	3	3	2	1	2	133	11·2	Poor	Old
St. Philip's ...	2	4	1	2	3	1	...	...	...	121	10·7	Fair	Old
Higher Grade ...	...	...	...	...	...	...	11	18	3	98	32·6	Fair	Old
Totals ...	2	13	8	19	17	21	26	32	7	984	14·7		

The figures unfortunately do not shew whether the condition increases or diminishes with the age of the boys. There does not seem, however, to be any great increase with age. It is extremely probable that physical drill and games tend to prevent any great extension of the condition.

With regard to the causes, although it is impossible to deny that defective lighting, or unphysiological seats and desks have some influence, they seem to be comparatively unimportant compared with the question of the position assumed by the scholars while seated at their desks. As a matter of fact the school with the least spinal curvature had the worst desks and seats. Lounging or leaning upon the desks is, however, strictly prohibited at this school. The commonest position was for the boys when working at the desk to sit with the left side turned towards the desk and the left elbow or arm resting on the desk. In this connection it is interesting to note that with only four or five exceptions it was the left shoulder which was found to be elevated.

Perfect symmetry is, of course, unknown, and the curvature noted is slight and capable of correction. Its presence, however, points to the existence of conditions which should be remedied. The principal point is for teachers to insist upon correct posture and sternly repress any tendency to lounging at the desk. At the same time desks should be so arranged as to make the best of the lighting, and all old desks and benches should be removed and modern ones substituted for them. The necessity also of suitable physical exercises should not be overlooked.

The condition of the girls also should be ascertained. Examination of the spine cannot be made during the ordinary inspection. With regard to causation, in the case of girls there are special considerations, such as the use of unsuitable corsets, high heels, etc., which should be borne in mind.

Skin Diseases: Eleven cases of some form of skin disease were found.

Vaccination: The condition of the children examined as to Vaccination is shown in the table given below. From this it will be seen that 12·3 per cent. showed no evidences whatever of having ever been vaccinated, and that of those who did show such evidence 79 per cent. had vaccination cicatrices below the standard area considered desirable by the Local Government Board.

It may be well to mention here that no action whatever was taken upon the information obtained on this point. It was collected for the purpose of discovering the actual condition of the school population in this respect.

Years.	Total Examined.	Percentage with no visible Vaccination marks.	Number of Marks.							Size of Marks.							Total Vaccinated.	
			?	0	1	2	3	4	+4	?	0	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$	1	+1	Percentage under 1 inch.	Perc'nt'ge with 1 inch and over.
3	58	3·4	...	2	4	2	12	37	1	...	2	11	26	16	2	1	95	5
4	87	12·6	...	11	4	5	23	44	...	...	11	19	30	22	4	1	93	7
5	266	12·7	...	34	29	58	42	101	2	...	34	78	83	49	13	9	90	10
6	68	16·1	...	11	3	12	12	29	1	...	11	15	20	18	3	1	93	7
7	14	...	...	...	1	4	4	5	...	...	...	4	5	4	1	...	93	7
8	9	11·1	...	1	1	2	1	4	...	...	1	2	2	1	1	2	63	37
9	5	20·1	...	1	...	2	1	1	...	...	1	1	2	1	...	...	100	...
10	2	...	...	...	...	1	...	1	...	...	...	1	...	...	...	1	50	50
11	11	9·1	...	1	1	2	5	2	...	...	1	2	...	4	1	3	60	40
12	241	14·5	...	35	19	39	67	78	3	1	35	33	44	72	25	31	73	27
13	234	12·4	...	29	19	39	53	91	3	...	29	35	32	64	37	37	64	36
14	29	6·9	...	2	3	3	10	8	3	...	2	3	3	9	6	6	56	44
15	2	...	...	...	1	...	1	...	...	...	...	1	...	1	...	...	100	...
	1026	12·3	...	127	85	169	231	401	13	1	127	205	247	261	93	92	79	21

(*e*) A large number of visits to the homes of children who were found to require attention were paid by the School Nurse (408) and the three Health Visitors (493). These were made chiefly with a view of having treatment carried out, but at the same time served the purpose of bringing the homes under observation. It was thus possible to obtain information regarding circumstances affecting the childrens' welfare which, when necessary, was brought to the notice of the proper authorities.

(*f*) *Methods employed and available for the treatment of defects.*

In every instance when a defect is discovered which requires treatment, intimation is sent to the parents or guardians stating the nature of the defect and urging them to seek medical advice.

This is followed up by visits either by the School Nurse or the Health Visitors to see whether the child is having the necessary attention, and also to advise and help parents to obtain suitable advice.

Treatment is carried out by several agencies:—

1. The private medical practitioner. Parents are always advised to obtain the advice of their own doctor, and many of the children are treated by them.

2. Addenbrooke's Hospital. Many children are treated at this institution, having been sent there by their doctors, or where they cannot afford private attendance, going there direct. During the year the Education Committee sanctioned an annual contribution to the Hospital of £40 a year for the treatment of school children, and an additional grant of £50 toward the cost of an X-ray installation for the treatment of Ringworm. No cases have yet been treated by X-rays, but this work will soon be undertaken.

3. The District Nursing Home has also undertaken to some extent the care of such cases as discharging ears for whom treatment could not otherwise be obtained. Those cases are the most likely to escape attention as they require treatment twice at least daily, frequently for a prolonged period. Many of the parents cannot afford to have this done privately, and those are cases which are scarcely suitable for treatment at the out-patient department of the Hospital. The result is that many are totally neglected. The presence of children with purulent and frequently very offensive discharges in school is most objectionable and injurious to others, and the result of neglect of this condition is likely to be disastrous to the child.

4. With regard to Pediculosis a great effort has been made to deal with this. It was found that many of the cases did not receive sufficient attention either on account of the mother being out at work all day, or owing to the death of the mother there being no one to do the necessary cleansing, or for various other reasons. It was decided therefore to employ a woman to cleanse the heads of girls who could not or did not receive attention at home. A large girls' school was selected as an experiment and an inspection made by the School Nurse of all the heads. Among those with Pediculosis a certain number were found requiring the attention of the nurse's assistant, and arrangements were made to have those attended to on the school premises. The work has now been going on for six months and has been extended to other schools. The actual number of girls treated in this way is not great (24), but the indirect effect has been most beneficial. There are unfortunately a number of parents who allow their children after they have been cleansed to lapse again into the same dirty condition.

The supervision of these cases has created a great deal of work, and the special efforts made to deal with them have met with a certain amount of success. The amount of attention required and the excessive amount of the Nurse's time taken up by these cases is, however, so great that it is to be feared that it will be necessary to resort to prosecution under the Children Act.

The total number of girls found to be in a verminous condition is 262. In 40 cases the condition was so extreme as to require exclusion from school.

5. With regard to Dental Inspection and Treatment it will be remembered that in April, 1907, the

Council agreed to a scheme for the inspection of the teeth of the children in the Elementary Schools, and through the generosity of Mr. Sedley Taylor, the Dentist engaged to carry out this inspection, was also occupied in treating the teeth of the children. The cost to the Council for inspection amounted to £50 a year, and the rest of the expense, which was borne by Mr. Sedley Taylor, amounted to £360 a year.

The work done during the first twelve months ending October, 1908, was fully reported upon by Mr. A. W. Gant and Dr. Cunningham, who had acted as Honorary Director of the Dental Institute.

The question of taking over the whole of the work and cost of inspection and treatment then came up for consideration. In February, 1909, the Education Committee recommended that Mr. Gant be appointed School Dentist for both inspection and treatment at a salary of £300 per annum from the 1st April, 1909, and that arrangements should be made for carrying on the dental treatment at an estimated cost of £110 per annum.

The Council having approved this recommendation unanimously, the consent of the Board of Education was then sought, and obtained, subject to the following conditions :—

(*a*) That dental work should be part of the work of the school medical service, and the dentist should act under the supervision and general direction of the School Medical Officer.

(*b*) That a detailed estimate of the annual expenditure should be furnished.

(*c*) That exact records of work done should be kept.

(*d*) That only those children should be treated for whom adequate provision could not otherwise be made either by parents or voluntary associations.

(*e*) And that admission to the Clinic should be subject to the authority of the School Medical Officer, and that treatment should be carried out under his supervision or direction, and under the joint responsibility of himself and the dental practitioner.

Subject to those conditions the Board have sanctioned for a period of two years a total expenditure of £410 per annum.

Excluding the salary of the Dentist, the estimate for the balance (£110) is made up as follows:—

	£	s.	d.
Assistant	39	0	0
Rent	20	0	0
Caretaker	6	0	0
Gas and Electric Light.	2	10	0
Instruments	8	0	0
,, Renewals...	5	0	0
Printing	10	0	0
Charts...	2	10	0
Fitting Materials ...	12	0	0
Miscellaneous	5	0	0
	£110	0	0

The actual expenditure for the year ended March 31st, 1910, has been £97 15s. 8d.

At it is not possible under present arrangements to restrict the inspections made by the Dentist to the age periods suggested by the Board as suitable for general medical inspection and obtain at the same time the most profitable return for the work done, the inspections are carried out by the Dentist independently of the inspection made by the School Medical Officer.

The children treated vary from five to nine years of age, and re-inspections are made of children already treated in order to detect and deal with any caries that may have appeared since the date of the previous inspection.

Those children selected for conservative treatment have an appointment card sent to them and attend at the Dental Clinic, appointments being made generally for five at a time. Those who require extractions are dealt with by Mr. Gant at Addenbrooke's Hospital, with the result that there is little difficulty in getting children to keep their appointments at the Clinic.

The amount and character of the work done is dealt with fully by Mr. Gant in his report and need not be further referred to here.

Certain general conclusions may however be drawn from the work which has been carried on in Cambridge since November, 1907, based upon an examination of the teeth of 6,219 children.

They are :—(1) The early age at which dental caries is found makes it absolutely essential that for school children inspection and treatment should begin with the youngest.

(2) To obtain the greatest possible benefit from the work and for the money expended attention should be concentrated upon the "six-year" molar.

(3) To maintain dentures made artificially sound in good condition periodical re-examinations should be made.

(4) The teaching of oral cleanliness and the use of the tooth brush should begin in the infant schools.

(g) The Detection and Prevention of Infectious Disease.

The system of notification by school teachers, introduced in the Autumn of 1906, continues to work well. It will be remembered that at that time a fully qualified nurse, with eight years experience of district nursing, was appointed at a salary of £95 a year.

What was proposed to supply the routine work of the School Nurse was a system of notification. The Head Teachers of all the departments of the various schools were asked to notify certain diseases, and were accordingly supplied with books for the purpose.

On filling in the notification form the books are so arranged that two copies are made. These are sent to the Public Health Department whilst the original is kept by the teacher. Of the two copies one is sent to the School Attendance Officers so that they may at once become aware as to which children are to be visited by the Nurse: in this way overlapping of work is avoided.

From the teacher's notification a transcript is made on a form of the particulars noted, in the first line. The remainder is filled up by the Nurse.

On the morning following the Nurse's visit her various reports are considered by the School Medical Officer who decides whether or not any of the children ought to be excluded, and also whether any are unfit for school. The great majority of histories admit of little doubt as to how the cases should be dealt with. The children are therefore excluded or not, or are certified as fit or unfit to attend school. In the cases of exclusion, notices to that effect are sent to the parents and teachers, and Sunday School Superintendents, and in every case full information is given to the School Attendance Officers. This necessarily entails a large amount of clerical work, the number of exclusion notices sent during the year being, to Parents 437; to Teachers 246; to Sunday School Superintendents 193. In all cases where a child is excluded till further notice a return certificate is sent. During the year the numbers were, to Parents 444; to Teachers 288; to Sunday School Superintendents 179.

Cases which appear from the reports to be doubtful are visited by the Medical Officer himself.

The following is a list of the notifications received during the year 1909:—

	Notification Forms.	Children concerned.
School Teachers	210	711
School Attendance Officers ...	379	857
School Nurse	286	286
Total ...	875	1854

The School Attendance Officers notify every child who is absent from school on pretext of illness and is not attended by a doctor, and also all who are believed to have careless mothers or guardians who are unlikely to carry out treatment properly. It is needless to add that the hearty co-operation of the School Attendance Officers is most essential to the success of notification.

A list of diseases ascertained to exist during the year, and the number of exclusions resulting is given below :

1. Infectious Diseases.			2. Uncleanly or Verminous children.			3. Non-infectious illness.		
Disease ascertained by Nurse.		Excluded.	Disease ascertained by Nurse.		Excluded.	Disease ascertained by Nurse.		Excluded.
Scarlet Fever	21	21	Pediculi Capitis	262	40	Headache	47	—
Diphtheria	19	19	Lice on Clothing	14	14	Colds, Coughs and Bronchitis	159	20
Mumps	209	202				Toothache and Bad Teeth	28	—
Measles	47	39				Enlarged Tonsils	11	—
German Measles	9	9				Adenoids	1	—
Whooping Cough	19	16				Earache	24	—
Chicken Pox	81	76				Ear Discharge	15	—
Diarrhœa	14	—				Enlarged Glands	43	10
Influenza	2	—				Defective Eyes	18	—
Rash	75	72				Inflamed Eyes	7	—
Sore Throat	170	13				Chilblains	26	—
Eczema	8	—				Other Skin Diseases	2	—
Impetigo	77	21				Injury	61	—
Ringworm (Head)	47	47				Abscess	5	—
Ringworm (Body)	24	5				Debility	1	—
Sores	66	2				Rheumatism	7	—
Scabies	23	23				Epilepsy	2	—
Pneumonia	6	—				Conjunctivitis	17	1
Febricula	3	—				Blepharitis	1	—
Desquamation	1	1				Infantile Paralysis	1	—
						Cystitis	1	—
						Herpes	2	—
						Chorea	2	—
						Alopecia	2	—
						Others	43	8

The total number of visits paid were 4786; of these 1788 were first visits. These numbers sufficiently emphasize the fact that obtaining a history of illness is only a small part of the nurse's work, and that further work has to be undertaken. This consists not only in reporting progress in writing to the Medical Officer in every case at least once a week, but in seeing that practitioners are consulted and the prescribed treatment is carried out. Sometimes considerable pressure has to be brought to bear before certain families will consent to have advice from a doctor.

(h) Defective Children.

Under the Elementary Education (Blind and Deaf Children) Act, 1893, the duty is placed upon Local Education Authorities of providing or obtaining efficient and suitable education for blind and deaf children. The duty is a compulsory one and many of those children, more especially the deaf, profit sufficiently from their education to become self-supporting and useful members of society.

The number of Cambridge children provided for under the Act is 8.

With regard to the mentally defective children the powers which Local Education Authorities have under the Elementary Education (Defective and Epileptic Children) Act, 1899, are optional.

The children in respect of whom these powers may be exercised include (*a*) those who not being imbecile or idiots are so defective mentally as to be incapable of receiving proper benefit from the instruction in ordinary elementary schools, but who would be benefitted by instruction in special schools, and (*b*) epileptic children.

Special provision may be made for the education of such children in either of the following ways :—

(*a*) By classes in public elementary schools certified by the Board of Education as special classes ; or

(*b*) By boarding out, subject to the regulations of the Board of Education, any such child in a house conveniently near to a certified special class or school ; or

(*c*) By establishing schools certified by the Board of Education.

Facilities for the examination of such children, which must be provided by the Local Education Authority, are now in existence, and a rough estimate of the number of children who would be likely to come within the operation of the Act has been made.

During the year a list of fifty children who were considered to be below the average in mental capacity was obtained from the Head Teachers, and the children were examined by the School Medical Officer.

As a result of this examination it would appear that there are roughly about two dozen children in the Cambridge Elementary Schools who would come within the meaning of the Act as being mentally deficient, but who could be taught provided some special provision were made for them. Further and more detailed examination might possibly eliminate some from this list, while on the other hand additions would probably also require to be made to it.

A conference was held on the 24th January, 1910, between a Committee of Ladies interested in the matter and the Hygiene Sub-Committee of the Education Committee. This was attended by Dr. Eicholz of the Board of Education who addressed the meeting on various points relating to the operation of the Act, the classification of feeble minded children and the organisation of special schools and classes.

The subject presents many difficulties which must be more fully considered, and will probably in the course of the current year again come up for consideration.

(*i*) Instruction in personal hygiene forms part of the general syllabus of instruction, while three lessons each term are given on the Board's syllabus of lessons on temperance.

Physical training, including breathing exercises, is carried on under the direction of school teachers who have undergone a course of instruction.

No open air schools or camps have been arranged for ; short of that, however, there should be no difficulty in many of the schools of some part of the work being done outside during fine weather.

ANDREW J. LAIRD,

School Medical Officer.

Guildhall,
Cambridge,
April 19th, 1909.

Report on Dental Inspection and Treatment of School Children,

For the 14 months from October 28th, 1908,
to December 31st, 1909.

The former report on Dental Inspection and Treatment covered a period up to and including October, 1908. It would be impracticable to make a separate report for the two remaining months of that year on account of the continuous nature of the work done. For the same reason the returns for those months cannot be omitted from the second report. Consequently they have been included with the returns for the year 1909, making this report cover a period of fourteen months. For purposes of comparison the actual amount of work done during 1909 is given in connection with Table A,

Summary of Work done.

A.—Table showing a Summary of the Monthly Returns of Work Done.

Month.	Number of Children Examined.	No. of Children Treated.			Fillings.					Extractions.			Dressings of Silver Nitrate.
		For Fillings, etc.	Extractions only.	Refused further treatment.	Cement.	Gutta Percha.	Amalgam.	Amalgam and Cement.	Amalgam and Root Canal Treatment.	Number of Children.	Temporary Teeth.	Permanent Teeth.	
Nov. 1908	221	58	65	7	...	...	148	131	...	101	134	5	115
December	209	53	34	6	...	...	134	105	...	57	76	4	89
Jan. 1909	285	39	28	3	...	...	103	93	...	47	67	3	81
February	307	59	38	4	3	1	141	138	...	65	84	3	57
March	224	66	63	5	...	1	139	96	...	74	90	14	163
April	203	54	38	...	...	...	117	82	...	79	110	5	126
May	200	61	31	7	...	...	136	94	...	52	82	4	59
June	263	74	22	2	...	1	130	106	1	41	61	2	65
July	197	61	37	...	...	...	101	75	...	78	97	9	57
August	51	40	...	...	...	...	61	38	...	16	18	...	18
September	378	74	52	4	...	...	113	90	...	78	104	4	122
October	257	75	57	3	...	...	129	115	...	117	165	3	100
November	278	80	61	3	...	...	146	129	...	90	115	5	119
December	200	63	84	...	1	1	114	84	2	113	128	9	75
Total...	3273	857	610*	44	4	4	1712	1376	3	1008	1331	70	1246
		1511			3099						1401		

* 398 more children had teeth extracted, but are not included in this column, as they had fillings done as well.

Table A gives the number of children examined and treated in the time covered by this report. 901 children attended at the Institute for fillings, of which 3,099 were inserted. After dividing by two the number of children who "Refused further treatment," i.e., those for whom only half the necessary fillings were done, the average number of fillings done per child was 3·5. These fillings refer entirely to the permanent teeth and the only treatment given to temporary teeth was a dressing with a solution of Silver Nitrate. The work done in the year 1909 is as follows:—Children examined, 2,843; children treated, 1,288 (777 children for fillings, etc., and 511 for extractions only); number of fillings, 2,581; 850 children had in all 1,182 teeth extracted; dressings of Silver Nitrate, 1,062.

The particulars of the work done cover two different phases, which will be analysed separately. From November, 1908, to March, 1909, the time was employed in completing the round of first visits to the schools. In April, 1909, when Mr. Sedley Taylor handed over the Dental Institute to the Corporation, a commencement was made with the second visits to the schools, the returns of which form the second portion of this report.

New Examinations.

The following schools were visited for the first time:— St. Philip's (Girls, Infants, and part of the Boys), St. Paul's (Girls only), King Street (Mixed and Infants), St. Matthews, Sturton Street (Infants), St. Barnabas (Girls and Infants), St. Giles (Boys, Girls and Infants), and Newnham (Mixed and Infants). The total number of children examined in these schools was 1,632. The scheme of examination adopted the previous year was followed, and all the children present of every age were examined irrespective of whether they would be eligible for treatment or not. This plan was slightly modified in the last two schools mentioned, so that the second examination could be started by the beginning of April.

The figures have been dealt with very completely, as apart from any interest they may merit as such, and when added to the figures published in last year's report, they can be taken as a statement of the condition of practically all the Elementary School Children's teeth in Cambridge.*

EXAMINATIONS DEFINED.

Owing to the fact that so little space is required to conduct the dental examinations, it has been found possible in many schools to examine one class without causing any derangement to the others. In some schools, however, structural limitations have made it necessary to disturb the distribution of all the classes in order to examine the children. Fortunately this has only been found in a few of the smaller schools where the whole examination could be completed in one or two visits. Although the examinations and treatment must have caused some dislocation of the school routine, the teachers have made every endeavour possible to further our aims.

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* Excepting the three higher grade schools, Eden Street, Park Street, and Paradise Street.

In many schools no objection has been offered by even one parent to dental examination. In others there have been three or four who refused permission to examine their children, but this was exceptional. All those who did refuse seemed to be under the impression that some treatment would be attempted at the same time, although it was always explained to the children beforehand, that examination only was intended.

As the sole object of these examinations has been treatment and not statistics, it has been of supreme importance to discover the very earliest symptons of caries. Recently numerous reports have been published in different centres on the teeth, but in these they have only been considered as part of a general medical examination of the children, and concern only those teeth which are obviously carious.

SOUND DENTITIONS.

Only 42 out of the 1,632 children examined, (i.e. 2·6 per cent.) were found whose teeth were entirely free from caries. In the previous report which concerned nearly 3,000 children, the percentage was 2·4. Most of those perfect dentures occurred with the youngest children whose permanent teeth had not then appeared. It will be seen from Table G that that the percentage with "No Decay" shows a marked and steady decline from the earliest years until the age of ten, when the number becomes so small that one child makes the numbers fluctuate.

Ignoring the temporary dentition whether sound or carious, 171 children or 12·5 per cent. had as many permanent teeth as were then in the mouth sound. At five and six years there may not have been more than one permanent tooth in position, so that the number of children with sound teeth at those ages cannot be compared with that of later years. The percentage in this column shows a similar decline to exactly the same year as the first one, when it fluctuates for the same reason.

SOUND AND CARIOUS TEETH.

Table B shows the total number of sound and carious teeth occurring at each year of school life. For the purpose of treatment the "unsavable" temporary teeth were divided into two classes during the examinations. Those placed in the unsavable columns represent all those teeth which needed immediate extraction; the others although unsavable are enumerated in the "uncertain" columns. In Table C these figures have been reduced or raised to represent 100 children for each year, in order that one year might be directly compared with the others. This table consequently represents the condition of the teeth of the average child for each year.

B.—TABLE SHOWING THE RESULTS OF AN EXAMINATION OF THE MOUTHS OF 1632 ELEMENTARY SCHOOL CHILDREN.

Ages.	Number of children examined.	Temporary Teeth.					Permanent Teeth.			
		Sound.	Total Carious.	Savable.	Un-certain.	Un-savable.	Sound.	Total Carious.	Savable.	Un-savable.
3 and 4 years ...	34	436	229	169	60	...	...	...	...	...
5 years	218	2407	1867	755	1033	79	134	51	51	...
6 ,, ...	264	2330	2348	707	1497	144	653	355	352	3
7 ,, ...	220	1459	1852	572	1118	162	1181	564	537	27
8 ,, ...	265	1101	1694	280	1209	205	2082	888	806	82
9 ,, ...	152	377	888	178	551	159	1456	645	572	73
10 ,, ...	144	237	598	...	485	113	1730	766	623	143
11 ,, ...	130	77	266	.	202	64	1887	970	774	196
12 ,, ...	111	23	174	...	118	56	1585	1121	942	179
13 and 14 years ...	94	10	45	...	21	24	1411	1055	863	192
Total	1632	8457	9961	2661	6294	1006	12119	6415	5520	895

C.—TABLE CALCULATED FROM THE FIGURES IN TABLE B GIVING THE AVERAGE RESULTS PER 100 CHILDREN IN EACH YEAR.

Ages.	Number of Children Examined.	Temporary teeth.					Permanent Teeth.			
		Sound.	Total Carious.	Savable.	Un-certain.	Un-savable.	Sound.	Total Carious.	Savable.	Un-savable.
3 & 4 years	34	1282·4	673·5	497·	176·5	...	...	...	...	...
5 years ...	218	1104·1	856·6	346·3	473·9	36·4	61·4	23·4	23·4	...
6 ,, ...	264	882·1	889·3	267·8	567·	54·5	247·6	134·4	133·3	1·1
7 ,, ...	220	663·1	841·7	260·	508·1	73·6	536·8	256·2	244·	12·2
8 ,, ...	265	415·4	639·1	109·4	452·4	77·3	747·5	335·	304·1	30·9
9 ,, ...	152	241·4	584·2	117·1	362·5	104·6	957·8	424·3	376·3	48·
10 ,, ...	144	157·6	415·1	...	336·7	78·4	1201·3	531·9	432·6	99·3
11 ,, ...	130	59·2	204·6	...	155·4	49·2	1451·5	746·1	595·4	150·7
12 ,, ...	111	20·7	156·7	...	106·3	50·4	1427·9	1009·8	848·6	161·2
13 & 14 yrs.	94	10·6	47·8	...	22·3	25·5	1501·	1122·3	918·1	204·2

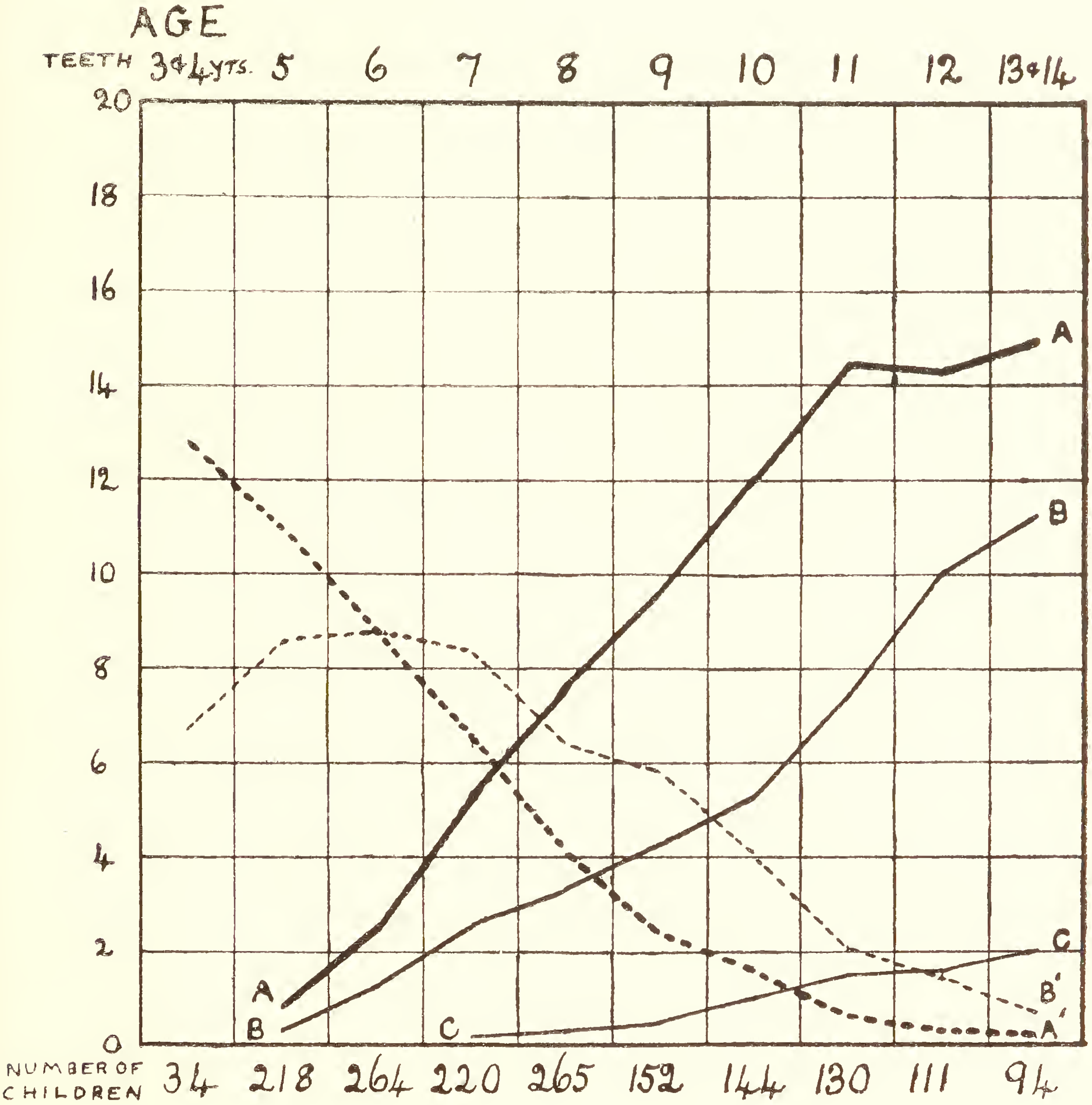
TEMPORARY TEETH.

Even at three and four years more than 30 per cent. of the temporary teeth were carious, although none of them were so diseased as to need extraction. It is very unusual to find any child at school who has not all its temporary teeth erupted (only one occurs in this report), so that the total number of sound and carious teeth added together, ought to be 20 for each child. In Table C it only amounts to 19·56 at three and four years, and this difference represents teeth which have been lost, either through extensive decay or extraction for toothache.

The same loss is found in the next year, although two more teeth have become carious. At six years of age it averages 2·3 per child. Only a small part of this figure represents teeth lost naturally to make way for the lower permanent incisors, as in that case the average number of carious teeth would have shown an increase corresponding to that of five years. This premature loss of so many teeth is one of the chief causes of irregularity in the permanent denture. In such cases the permanent tooth tends to come forward and fill up the space so left. When the other permanent teeth appear later, there is not room enough in the jaw for them to be arranged regularly.

At six years of age also, the average number of sound and carious teeth is approximately equal, and every year after this one shows an increasing proportion of carious to sound temporary teeth.

D.—DIAGRAM ILLUSTRATING TABLE C, AND SHOWING THE AVERAGE NUMBER OF SOUND AND CARIOUS TEETH OF BOTH DENTITIONS OCCURRING IN EACH YEAR OF SCHOOL LIFE.



A represents the average number of Sound Permanent Teeth.
A' represents the average number of Sound Temporary Teeth.
B represents the average number of Carious Permanent Teeth.
B' represents the average number of Carious Temporary Teeth.
C represents the average number of Unsavable Permanent Teeth.

Diagram D, which has been constructed from the figures in Table C, shows the tendency to retain the temporary teeth after the normal time to discard them : this is another of the causes of irregularity in the permanent teeth. The line representing the sound temporary teeth (A') makes a regular descent until the ninth year, about which time the bicuspids appear. The dis-appearance of the temporary teeth ought to be more marked at this period, since eight permanent bicuspids have to take the place of eight temporary molars. Instead of this, the loss becomes less and the line falls away to a curve, which would be accentuated were the carious teeth also included.

Permanent Teeth.

The period of the appearance of the first permanent teeth varies considerably with different children. In Diagram H it will be seen that 74 per cent. of the children examined at five years of age had no permanent teeth, and at six years there were still about 25 per cent. who had not a permanent tooth then appearing. Even at seven years a few children were the same. In order to standardise these returns any child with only a part of one tooth showing, had to be included amongst those with permanent teeth, although many months would elapse before such a tooth reached its final position.

The variation follows no obvious rule, but it has been commonly noticed that the six-year molars appear earlier when the the temporary teeth have become so carious as to fail to be of any value in mastication. In such cases the liability to caries increases both on account of the unhealthiness of the mouth and because of the fact that the tooth has not reached a sufficient stage of its development to resist such conditions.

Liability to Caries.

This liability to caries divides the years of school life into three groups, which are brought out in the line representing caries of the permanent teeth in Diagram D. The first group covers the ages from five to seven years, i.e., the period of the first appearance of the six-year molars. And "taking into consideration the small number of permanent teeth then in the mouth," it is by far the most critical. The next period comprises the ages eight to ten years, when the proportion of carious to sound teeth becomes less. During this time the incisors are the only teeth whose first appearance predominates. From ten years upwards the bicuspids and second permanent molars appear, and the average number of carious teeth per child rises out of all proportion to the previous years. This period also is the one in which the incisors are found carious. It is quite exceptional to find carious incisors before ten years of age. In such cases that are found, irregularity of the position of the teeth is the general cause. After ten years the incisors of many children have to perform every function of mastication on account of the total loss of molars. This un-natural strain seems to destroy them very quickly. These three periods have a most important bearing on any scheme for the treatment of school children's teeth, and will be dealt with in another portion of this report.

E.—TABLE SHOWING THE CHILDREN GROUPED ACCORDING TO THE NUMBER OF CARIOUS PERMANENT TEETH IN EACH MOUTH.

Ages.	Number with Permanent Teeth.	Good.	Fair.				Bad.				Very Bad.														
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	24
5 years	57	32	12	5	3	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6 „	199	67	32	31	15	54	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7 „	212	35	21	37	11	104	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8 „	264	25	11	25	25	153	15	7	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9 „	152	4	2	10	8	81	22	16	6	2	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
10 „	144	5	2	2	2	55	24	22	10	9	5	3	2	...	2	...	...	...	1	...	...	...	...	...	...
11 „	130	2	1	1	2	26	9	14	15	14	13	9	7	5	2	2	1	4	1	...	...	1	1	...	...
12 „	111	1	...	...	...	6	9	4	6	17	13	6	12	8	6	7	5	3	2	3	2	1	...	...	..
13 and 14 years...	94	...	...	...	...	4	1	6	7	4	12	10	9	7	10	6	5	3	3	5	...	...	...	1	1
Total	1363	171	81	111	66	488	84	69	45	48	43	28	31	20	20	15	11	10	7	8	2	2	1	1	1
			746				246				200														

F.—TABLE SHOWING THE CHILDREN GROUPED ACCORDING TO THE NUMBER OF UNSAVABLE PERMANENT TEETH IN EACH MOUTH.

Age.	Number of Children examined.	UNSAVABLE TEETH.						Totals
		1	2	3	4	5	6	
6 years	264	1	1	...	...	...	...	2
7 „	220	5	8	2	...	...	...	15
8 „	265	32	19	4	...	...	...	55
9 „	152	28	12	3	3	...	...	46
10 „	144	23	33	7	6	2	...	71
11 „	130	18	33	12	12	2	3	80
12 „	111	23	26	12	10	3	2	76
13 and 14 years... ...	94	16	26	13	14	1	3	73
Total	1380	146	158	53	45	8	8	418

"DISTRIBUTION OF CARIOUS TEETH."

The three periods again appear in Tables E and F, which show the total number of carious permanent teeth and unsavable permanent teeth occurring in each individual mouth. Although 1-4 carious teeth is taken in Table E as a standard for "fair" dentures, the division is not a correct one for the lowest ages. Many children are included there, who have every one of the permanent teeth then in the mouth, carious. Such children obviously cannot be classed in the same division as a child of twelve years with 20 sound to 4 carious teeth. This table, however, serves to show what enormous inroads caries makes in the teeth of some children. One child has been examined who had only 4 sound to 24 carious teeth. This child and another could not be included in Table F, as they had 8 and 10 unsavable teeth respectively.

UNSAVABLE PERMANENT TEETH.

The unsavable permanent teeth represent a different class to those so described in the "Temporary Teeth," where only teeth needing extraction were included. The development of the roots of nearly all the permanent teeth, especially the six-year molars, is only just commencing when the crown appears in the mouth. The roots are not fully formed with these teeth until about the ninth year. Any operation which includes the treatment of the pulp of the tooth before that time is very protracted and uncertain. For this reason some of these teeth have been classed as "unsavable," although even as they are, they may be of considerable use in mastication for the time being.

This was illustrated very clearly by a child aged seven, who presented herself recently at the Institute with a six-year molar so septic and inflamed, that extraction was the only possible means of giving her relief. The roots of the tooth were found to be only half developed, and the caries had attacked but a small portion of the coronal surface. Happily this is the only case where a permanent tooth has been extracted for a child so young.

"UNSAVABLE DENTURES."

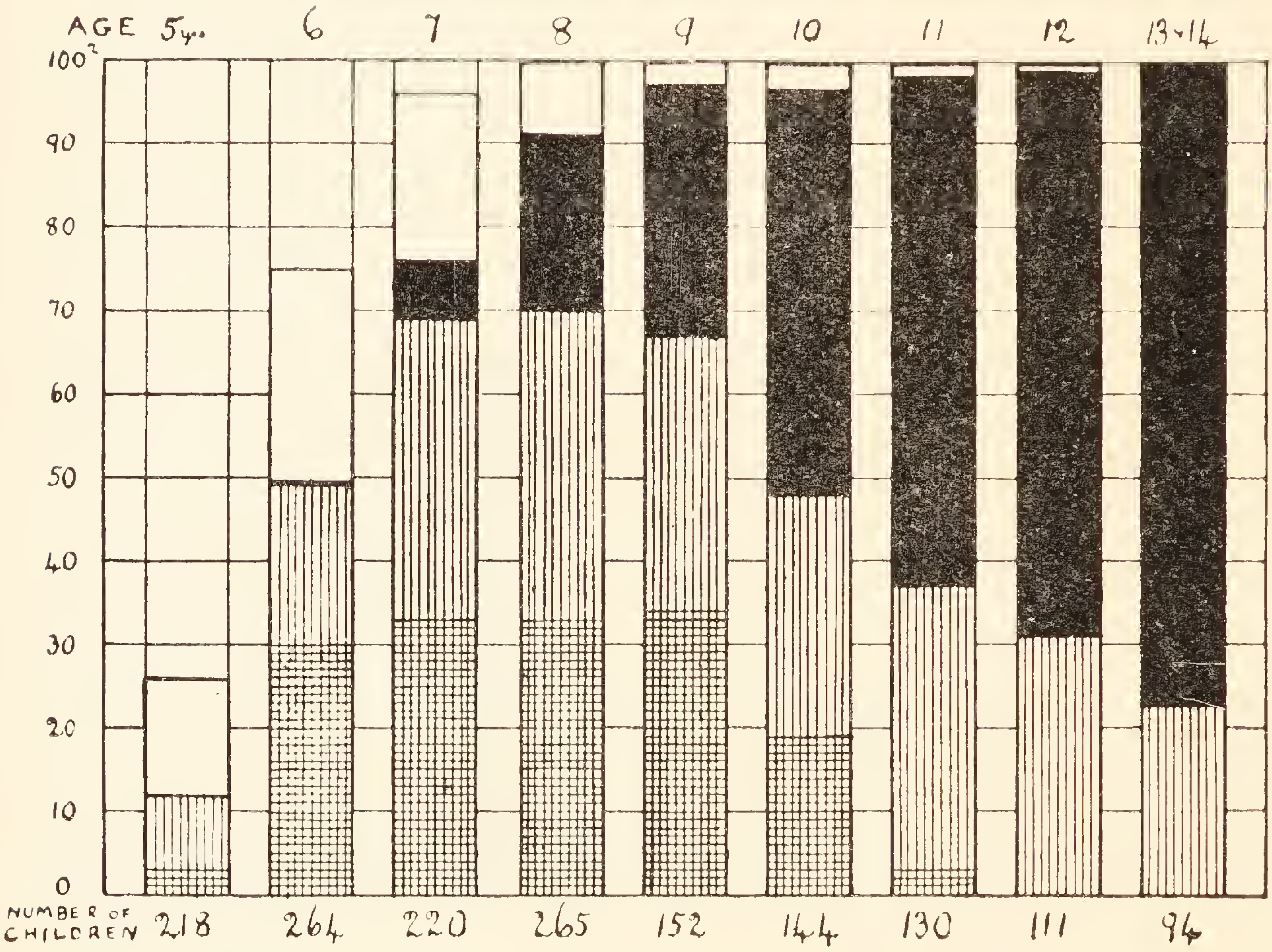
In both examinations and treatment the standard has been a denture with unsavable teeth rather than the particular number of unsavable teeth found. One unsavable tooth has an injurious effect on the whole side of a denture. In the first place, it quickly renders its opposing tooth valueless, since one tooth by itself is of no use in mastication. If this tooth is not already carious, the abolition of use is certain to cause it, and to involve other teeth on the same side as well. Then, mastication must be done on one side only, and if both sides are effected, as frequently happens, this function falls on the front teeth, which, as mentioned on page 135, is a predisposing cause of caries.

Table G and Diagram H show how great is the number of children in whose mouths are unsavable teeth. The diagram is constructed in the same way and its details are almost identical with the one published in last year's report. It is again included, as it serves well to show how the treatment was distributed and what proportion of the children could not be treated on account of unsavable teeth.

G.—TABLE SHOWING THE NUMBER OF CHILDREN AND THE PERCENTAGE HAVING SOUND TEETH, SOUND PERMANENT TEETH ONLY, ARTIFICIALLY SOUND, AND ONE OR MORE UNSAVABLE TEETH.

Age.	Number of Children.	No Decay. Including both Dentitions.		Number of children with permanent teeth	Number of Children whose Permanent Teeth were					
					Sound.		Made Artificially Sound.		Unsavable.	
			%			%		%		%
3 and 4 years	34	2	5·9	...	...	...	...	...	...	...
5 years	218	12	5·5	57	32	56·1	6	10·5	...	...
6 ,, ...	264	10	3·8	199	67	33·5	78	39·2	2	1·
7 ,, ...	220	6	2·7	212	35	16·5	72	33·9	15	6·8
8 ,, ...	265	6	2·3	264	25	9·5	86	32·6	55	20·7
9 ,, ...	152	2	1·3	152	4	2·6	52	34·2	46	30·2
10 ,, ...	144	2	1·4	144	5	3·5	27	18·9	71	48·3
11 ,, ...	130	2	1·5	130	2	1·5	4	3·1	80	61·5
12 ,, ...	111	...	...	111	1	·9	...	...	76	68·5
13 & 14 years...	94	...	...	94	..	...	...	...	73	77·8
Total ...	1632	42	2·6%	1363	171	12·5%	325	23·8%	418	30·6%

H.—Diagram Graphically Representing Table G, and in addition showing the Appearance of the First Permanent Molars and their Relative Liability to Caries.



The height of the column indicates the Percentage of Children having Permanent Molars; the shaded parts of these columns show those with sound and carious teeth.

SOUND ☐ SAVABLE ▥ SAVED ▦ UNSAVABLE ■

At six years the percentage of unsavable dentures was so small that it cannot be shown clearly on this diagram. At seven years there were 6 per cent. with unsavable teeth although many of the children represented in the same column had only one or two permanent teeth just appearing. Those with unsavable teeth probably had them already carious at five years, and so may be considered to be exceptional. It will be seen from Table F that only 17 children under eight years of age had unsavable teeth. The number of children with permanent teeth in this "first period" was 468, so that under 4 per cent. had unsavable dentures.

At eight years 20 per cent. had unsavable teeth, and by rapid strides this percentage rises to 78 at thirteen and fourteen years.

TREATMENT.

Those children made artificially sound (as shown by the darker shading in Diagram H) are almost entirely confined to those years which are included in the first two periods of the "liability to caries." A very few children were treated aged eleven years, but none at all after that age. A number of children have been omitted from this class although they have received conservative treatment. With some, one tooth has been filled to cure toothache, and others have had two or three teeth filled out of four and have not kept their last appointment, so that although a considerable part of the treatment necessary was done, they could not be classed as "artificially sound."

The percentage of children who had savable teeth, but were not treated is shown in the lighter shading of the columns. It includes two classes: those who had several teeth carious and would have taken up more time than could be given to individual cases, and those who refused to attend although asked to do so. The latter class chiefly consisted of those children who needed both extractions and fillings, and would not have the teeth extracted. No appointments were sent for fillings to these children, because any conservative work done to their permanent teeth would be nullified whilst septic and discharging roots remained in the mouth.

One afternoon a week was allotted to the extractions, but it has been necessary on some occasions on account of pressure of the work to apply to the Governors of Addenbrooke's Hospital for permission to use the room on an additional afternoon as well; this has always been willingly granted.

Examinations were done on either two or three afternoons per week, and the rest of the time, which might be estimated at

$\frac{7}{10}$ of the whole, was entirely devoted to conservative work. This division of the work into its component parts is indispensable when it is desired to arrive at the average time taken and cost per child. Usually five appointments are sent in the morning and three or four in the afternoon for fillings. Only a few of these children can be finished at one visit, and many have to attend three or even more times before all the fillings can be completed.

GENERAL CONDITION OF THE TEETH AND GUMS.

Many children were examined whose mouths were in an extremely unhealthy condition, which was not at all proportionate to the number of carious teeth present. One septic tooth in a mouth may cause more direct injury to the system than several only slightly carious. To differentiate between such children three divisions were made at the examinations; A, those with healthy gums; B, those whose gums were inflamed and the presence of pus detected; C, those whose mouths were in such an unhealthy state as to threaten serious injury to the general health of the child.

Of the 1,632 children examined 1,094 were in class A, 527 in class B, and 65 in class C. No children were included in the latter classes unless the presence of pus in the mouth was clearly indicated by the condition of the gums. It almost invariably appeared as a large abscessed swelling or as a fistulous opening through which there was a constant discharge of pus. Practically 30 per cent. of the mouths examined showed such conditions. In addition to these children many of those in Class A had teeth which were dead and where sepsis might be suspected. No attention was paid to such teeth, as it was found early in this work, that a strict interpretation of these signs, which then led to almost all the children needing many teeth extracted, defeated its own object, because such a great proportion of the parents refused to send their children for extractions which did not seem necessary to them. This resulted in a serious deficit of those children who were eligible for conservative treatment.

Although there were several children whose permanent teeth were septic, the great majority of those in Classes B. and C., were those whose temporary teeth caused the septic matter to be discharged.

Second Visits to the Schools.

When the second examinations were started in April, 1909, the committee decided that the work should be carried on according to some well ordered plan, which included a visit to every school in the year. Consequently instead of examining all the children in the schools, only those whose ages ranged from five to eight years eleven months inclusive, were taken in addition to those of any age who had been made "artificially sound" previously.

This round of visits to all the schools will be completed within a week of the estimated period. Next time it would be advisable to include the examination of all the children aged nine years, although a little more than a year might be required. By such a plan it would be possible in the future to reach the more ambitious scheme which would include all the children (except those who already have unsavable dentures), in both age periods mentioned in the first portion of this report.

The total number of children examined was 1707. In order to show the present condition of the mouths in which work was done a year earlier, these children were arranged in three groups: 1, those who were made artificially sound in 1908 and the latter part of 1907; 2, those who refused treatment in that time; and 3, the remainder of those examined. The last group includes all new children and those who did not need or receive appointments for fillings in 1908.

None of the tables given below which relate to one or other of these groups can be taken as normal, since each division is selective. Table J shows the total number of sound and carious permanent teeth examined in each group, expressed in the ratio of 100 children per year as was done in Table C.

J.—TABLE SHOWING THE TOTAL NUMBER OF SOUND, CARIOUS AND UNSAVABLE PERMANENT TEETH FOUND IN EACH OF THE THREE GROUPS, EXPRESSED IN THE RATIO OF 100 CHILDREN FOR EACH YEAR.

Age.	Treated in 1st year (1908).				Refused Treatment in 1st year.				The rest.			
	No. of Children Examined.	Sound.	Savable.	Unsavable.	No. of Children Examined.	Sound.	Savable.	Unsavable.	No. of Children Examined.	Sound.	Savable.	Unsavable.
		%	%	%		%	%	%		%	%	%
5 years	...	...	..	...	...	...	...	...	229	60·7	16·1	...
6 ,, ...	12	483·3	175·	...	17	241·2	282·4	...	318	217·6	86·8	·6
7 ,, ...	64	662·5	154·7	...	50	426·	324·	22·	252	468·2	183 7	4·4
8 ,, ...	93	809·7	132·2	...	84	678·6	316·6	38·1	160	641·2	226·2	8·1
9 ,, ...	133	1109·8	87·2	...	40	747·5	345·	47·5	19	926·3	142·1	10·5
10 ,, ...	103	1279·6	111·6	...	...	...	..	...	...	...	...	...
11 ,, ...	88	1643·2	115·9	..	...	...	...	...	...	..	...	...
12 and 13 years...	45	1817·7	120·	...	...	.	...	...	...	...	...	...

CHILDREN TREATED IN 1908.

It will be seen that with all the children treated in 1908, no tooth had become so carious in the meantime as to be unsavable. Unfortunately it was not possible to persuade every child who had other teeth carious to attend the second time (although the proportion of such cases was very small); so that next year some who in 1908 were made artificially sound may have developed unsavable teeth. The past year's experience, however, proves that with the co-operation of both parents and children, no tooth need ever become unsavable during school life.

In the first column teeth which were filled previously and had not since become carious were included as "sound." Thus, the "savable" column represents the number of teeth which had become carious in the one year. It is unfortunate that the number of children treated in 1908, when aged five years and now six years of age, is so small that no comparisons can be safely deducted from the figures. From the higher numbers in the middle of the column, it may be inferred that on the average just over one tooth per child became carious each year. This inference is strengthened by the figures as to caries given in

Table C, where a similar increase is found. But instead of a sudden rise to 2 per year at 11 years of age, the average in Table J remains constant for those treated in 1908.

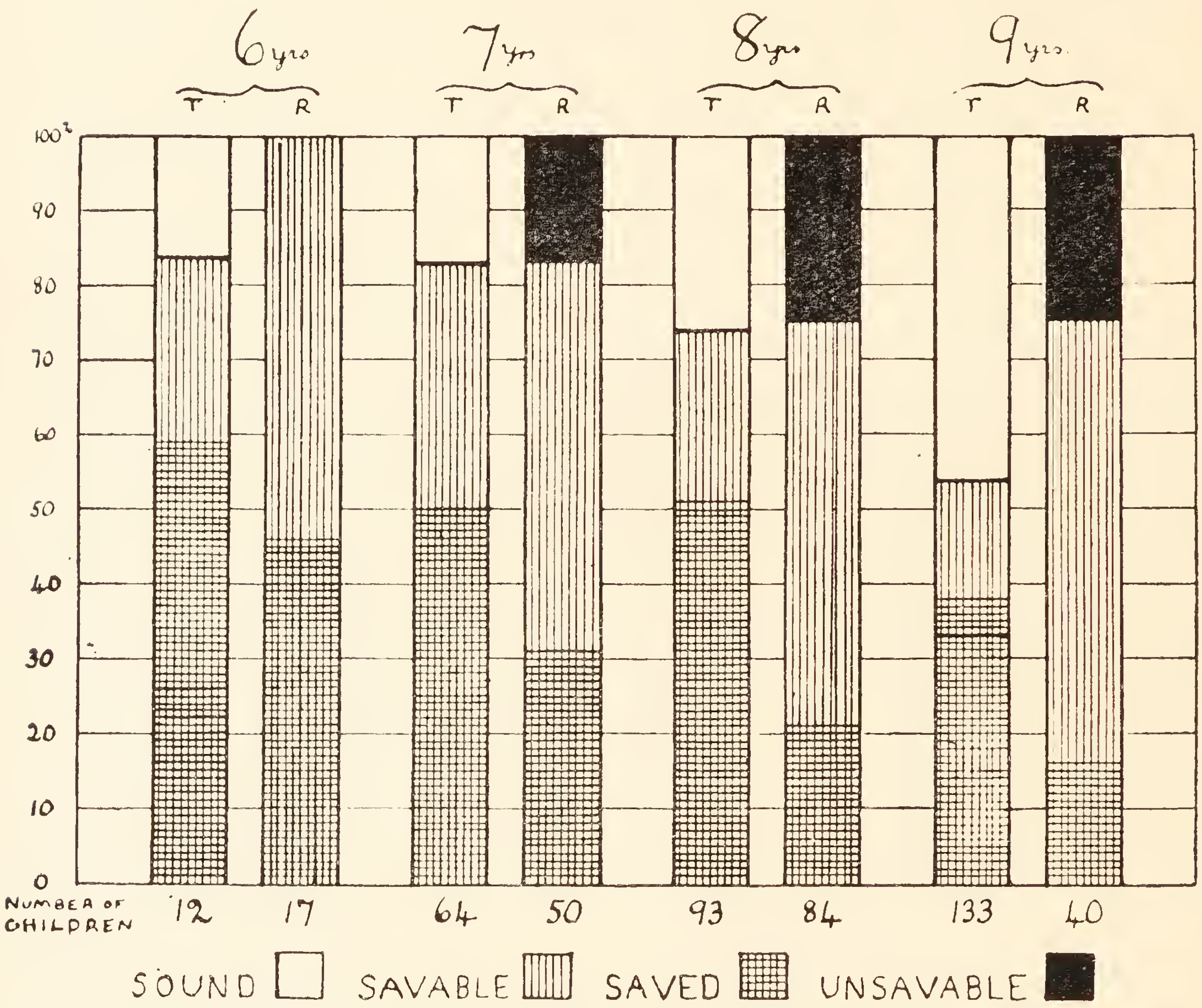
The following circumstance had the effect of making these totals of carious teeth higher than will be found next year. Nearly all upper six-year molars have two seperate and distinct fissures. These are the points on which food lodges most and causes decay. At the commencement of the work the practice was to consider this part of the tooth on the same principle as any other. Consequently if one fissure were carious and the other only showed a discolouration and did not answer to the final test for caries, i.e. a probe, only the first one was filled. Invariably a second examination of such cases found the other fissure effected. So many children had to attend after the second examination simply to have this remedied, that it is now the rule to fill both fissures, provided that any symptoms can be discovered to justify it. The second fissure however is not filled when it is clearly sound, but any other tooth would not be considered carious unless the point of the probe discovered a distinct cavity; this test is not so strictly observed in the cases mentioned.

K.—TABLE SHOWING THE NUMBER OF CHILDREN WHO WERE TREATED IN 1908 AND RE-EXAMINED IN 1909, AND THE PERCENTAGE NOW HAVING SOUND PERMANENT TEETH, ARTIFICIALLY SOUND, AND ONE OR MORE UNSAVABLE TEETH.

Age.	Number of children.	No Decay, including both Dentitions.		Number of children whose Permanent Teeth were					
				Sound. *		Made Artificially Sound.		Unsavable.	
			%		%		%		%
6 years... ...	12	...	...	2	16·6	7	58·3	...	...
7 ,, ...	64	...	...	11	17·2	32	50·	...	...
8 ,, ...	93	...	...	24	25·9	51	55·	...	...
9 ,, .. .	133	2	1·5	61	45·9	50	37·6	...	...
10 ,, ...	103	3	2·9	34	33·	50	48·5	...	...
11 ,, ...	88	7	8·	32	36·4	38	42·	...	...
12 and 13 years	45	4	8·1	18	40·	16	35·5	...	...
Total ...	538	16	3%	182	33·8%	244	45·3%	...	

NOTE—*These children were made "artificially sound" in 1908 at the first visit to the schools; a tooth was considered sound at the second examination, when it did not need any treatment, irrespective of whether it had been filled or not a year previously.

L.—Diagram Graphically Representing Table J, and in addition showing the Percentages in that Table contrasted with similar Percentages for those Children who Refused Treatment in 1908, and were Re-examined in 1909.



The Columns headed T represent the condition in 1909 of those children whose teeth were made artificially sound in 1908.

The Columns headed R represent the condition in 1909 of the teeth of those children who refused treatment in 1908.

Sound Dentures.

Table K shows the figures respecting sound dentures treated in the same way as those given in Table G. The percentage of children with "no decay," contrary to the earlier table, rises from 1·5 per cent. at nine years to 8 per cent. at 12 years of age. This arises through the gradual loss of the temporary dentition.

At six and seven years, the first age period, the percentage of those who required no further treatment is 16 and 17 per cent. respectively. As was mentioned earlier, the six-year molars are only just appearing at these ages and one or more years may elapse between the first and the last tooth of this series taking its final position. It is usual to find some six-year molars carious long before the others. For this reason further examinations of these children are indispensable at intervals.

In the second period starting at eight years, the percentage immediately rises to 26, and at nine years it reaches 46 per cent., although this percentage is not maintained in the higher years. The probable explanation of the decline is contained in the previous section, since most of the children who required only the distal fissure of their six-year molars filled at the second examination occur after nine years of age.

Re-examinations of Refusals in 1908.

Diagram L shows the present condition of the teeth of those children who refused treatment (marked R) in 1908 contrasted with those who accepted treatment (T). A year ago all the children of every age in this diagram could have been represented by a series of columns entirely made up with the lighter shading, since every one of them had carious teeth which were all savable then. The dentures of the children in the "refusals" column represent the deterioration which takes place in one year; and had no children at all received treatment, all the dentures now in the "treated" columns would be in a like condition. Hence, instead of 18 per cent. of the children at seven years having their permanent teeth free from caries, almost exactly this number would now have unsavable dentures. At eight years of age 25 per cent. have sound teeth instead of the same number having unsavable teeth. At nine years the unsavable dentures again amount to 25 per cent. although the sound dentures then reach 46 per cent.

These figures show how important it is still to educate the parents to the early necessity of treating their children's teeth. Many of the teeth now unsavable were to them apparently sound a year ago. Now, when they are convinced of the need for treating these teeth which are so carious that it needs neither a mirror nor a probe to discover it, it is too late to remedy the defect. The efforts made during the past two years, and the very fact that treatment was persistently offered them, has had a successful response from most parents, but the time has been too short for such new principles to reach and convince every parent in Cambridge.

It will be seen that a certain number of children who refused treatment in 1908 accepted it in the next year. Many of them had suffered from severe toothache in the interim, and their parents insisted upon their attendance, whereas in the previous year it had been left to the whim of the children themselves. Others were prevented from attending at that time by circumstances such as illness ; and with the infants, sometimes bad weather. The rule is to send appointments to all children who come within our age or other limits, and no difference is made between those who refused treatment previously and the others.

It is interesting to compare the proportion of children in these groups who had some fillings done but did not attend a second time, when required, to have the remainder filled, and so are not included in these tables. Only 7 out of 545 children occur amongst those who were treated in 1908 and again in 1909 ; i.e., 1·3 per cent. 7·2 per cent. of those children who refused in 1908 but allowed the treatment to be started in 1909, would not return to have the work fully completed.

The proportion of the children who refuse any kind of treatment varies greatly with the different localities visited, but in all parts it shows a decrease from previous years.

M.—TABLE SHOWING THE NUMBER OF CHILDREN EXAMINED AT THE SECOND VISIT TO THE SCHOOLS, OTHER THAN THOSE WHO REFUSED OR ACCEPTED TREATMENT IN 1908, AND THE PERCENTAGE HAVING SOUND TEETH, SOUND PERMANENT TEETH ONLY, ARTIFICIALLY SOUND, AND ONE OR MORE UNSAVABLE PERMANENT TEETH.

Age.	Number of children	No Decay, including both Dentitions.		Number of children whose Permanent Teeth were					
				Sound.		Made Artificially Sound.		Unsavable.	
			%		%		%		%
5 years ...	229	15	6·5	40	62·5	7	10·9	...	...
6 ,, ...	318	19	5·9	87	40·3	61	28·2	1	·5
7 ,, ...	252	10	4·	70	27·6	91	35·8	7	2·7
8 ,, ...	160	4	2·5	35	21·9	50	31·2	8	5·
9 ,, ...	19	...	...	4	21·	8	42·1	1	5·3
Total ...	978	48	4·9%	236	33·1%	217	30·4%	17	2·4%

GENERAL CONDITION OF THE TEETH AND GUMS.

The following were the percentages contained in the three divisions A, B, and C, (which were defined on page 140) at the second examinations in 1909.

	A.	B.	C.
I. Treated in 1908 ...	69%	30%	1%
II. Refused in 1908 ...	52%	40%	8%
III. Others Examined ...	65%	30%	5%

It will be seen that the number of children in class C has been considerably reduced by the treatment done in 1908 falling from 8 to 1 per cent. whilst those in class A have risen from 52 to 69 per cent.

The value of this work is but faintly shown by these figures, since many individual cases, in which great improvement was effected, lose their significance when they appear as only a part of a larger total. The following particulars, which were kindly supplied by the headmistress of an infant school, illustrate this point. A child with a very septic mouth was constantly absent on account of toothache and general ill-health. During the year she only made 64 per cent. of the possible attendances. Immediately the septic teeth were removed, her general health showed a marked improvement and during the subsequent year she attended 123 more times and the total attendances for the year amounted to 91 per cent. Many such cases could be quoted.

The figures in classes I. and III. are approximately equal, since although they belong to different groups when fillings only are considered, the children in both classes had temporary teeth extracted in 1908, when any septic trouble was present.

CLEANLINESS OF THE TEETH.

The statement made in last year's report regarding the general neglect of cleanliness of the teeth is still correct. It is true that many children who attended the Institute for fillings have profited by the advice which was given them, and now use their toothbrushes regularly, but they form only a small section when all the children are examined in a school. The others (excepting perhaps the elder girls) never use a toothbrush, and consequently their back teeth are nearly always covered with a film of semi-liquid foodstuff, which sooner or later must give rise to caries. This condition varies considerably in degree with the different children, both the nature of the food they eat and their method of masticating it having far-reaching effects. It is impossible for one who is practically a stranger to the children, and who sees only a limited number each year, to bring about an appreciable improvement in the school population of a town in this respect. Besides which, the injury has been done when a child has to attend the Institute for fillings, and comes under this influence. A great deal of the caries could be prevented were it possible for the parents and teachers to foster the habit of using the toothbrush regularly with the youngest children.

A. W. GANT,
Borough Dentist.

Dental Institute for Children,
12a, Parkside, Cambridge,
April 16th, 1910.

Borough of Cambridge.

REPORT ON SLAUGHTERHOUSES.

Public Health Department,
Guildhall, Cambridge.

I have now completed my examination of the private slaughterhouses in the Borough, and beg to present the following report upon them.

There are at present 25 private slaughterhouses in occupation, and 23 in actual use.

Until 1900, when the Local Government Board issued a memorandum upon the subject of slaughterhouses, there was no official guide as to the requirements which such premises should be expected to comply with. As a result a number of those in the Borough do not comply in every respect with such modern requirements, and this requires to be borne in mind when considering the points of variance with the Board's model.

Apart from structural matters, slaughterhouses are regulated by the powers conferred by Section 169 of the Public Health Act, 1875, which incorporates the provisions of the Towns Improvement Clauses Act, 1847, with respect to slaughterhouses, and by the byelaws made under the Public Health Act.

These enactments recognise two classes of slaughterhouses, viz., slaughterhouses which were in use and occupation at the passing of the Public Health Act of 1875, and have so continued ever since, and slaughterhouses which were not in use and occupation at that time. Both classes are regulated by the same byelaws, but the former only require to be registered by the Local Authority, while the latter require to have the licence of the Local Authority. The difference between the two classes is that registration applies to the premises, while the licence applies to the occupier. Occupiers of registered premises do not require a licence.

With regard to the duration of licences, those granted after the adoption of the Public Health Acts (Amendment) Act, 1890, must be for periods of not less than twelve months. This Act has been adopted in Cambridge and came into force on the 1st January, 1893.

With regard to the use and occupation of "registered" slaughterhouses, no premises can be legally used or occupied unless they have been *continuously* in use and occupation ever since 1875. In the event of any lapse of tenancy it would seem that a Local Authority has the power to prevent any further use of the premises.

Should the owner of such premises be convicted of an offence against the byelaws, the Justices may forbid slaughtering for any period not exceeding two months, and for a second or other subsequent conviction the Justices may forbid absolutely the slaughtering of cattle in the slaughterhouse concerned.

In the case of "licensed" slaughterhouses, the licence granted has been held to be a personal licence, and expires on the death or retirement from business of the original licensee. (Godwin v. Sale). Any other person wishing to take over the business of slaughtering must apply for and receive a licence before commencing slaughtering. Three of these slaughterhouses have changed hands without the present tenants being licensed, and would therefore appear to be illegally occupied.

Licences may also be suspended or revoked for offences against the byelaws in the same manner as registered slaughterhouses.

Of the 25 slaughterhouses now in occupation it would appear that 16 are really "registered" slaughterhouses, and the remaining 9 should all be "licensed."

With the exception of the Co-operative Society's and Speechley's slaughterhouses (Nos. 24 and 25), which are subject to an annual licence, it is extremely doubtful whether licenses have ever been granted for the others which have been established since 1875. In this connection it has been decided (Howarth v. Manchester, Mayor of (1862) 6 L. T. (N.S. 683)) that a resolution of a Committee, confirmed by the Board, though not communicated to the grantee is equivalent to a licence. If such a resolution exists regarding those premises they are occupied legally, if not then the occupiers should be called upon to apply for a licence.

The premises referred to are the following :—

(1) Slaughterhouses established before 1875. These are properly "registered" houses, and may continue to be occupied except in the circumstances already mentioned.

No	Situation.	Date of Establishment	Occupier	Subsequent Occupier
1	14, Bene't Street... ...	1797	W. Robinson	
2	Newman's Yard, East Rd.	1817	F. Todd	W. Rogers
3	Back of New Square ...	1842	R. B. Palmer ...	(1) T. Pask (2) W. Rogers
4	37, Bridge Street ...	1847	G. Dring	
5	Fitzroy Back Lane ...	1852	C. Wells	
6	14, Fitzroy Street ...	1857	W. Hawkes	
7	Cambridge Place ...	1857	S. Rickard	A. R. Nichols
8	Tan Yard, Magdalene St.	1857	C. B. Warrington	
9	Express Yard, King Street	1862	Goodliffe & Co.	
10	29, Fitzroy Street ...	1862	C. Redfarn	Mr. Custerson
11	190, East Road	1862	P. T. Coulson	
12	55, Newmarket Road ...	1867	J. Traylen	
13	15, Gwydir Street ...	1870	J. Redfarn	
14	53, Norwich Street ...	1872	W. Adkins	
15	64, Hills Road	1872	E. Bulman	W. Adkins
16	67, Gwydir Street ...	1869	J. Redfarn	A. Goode

(2) Slaughterhouses established after 1875. These should be "licensed" premises. The last two are subject to annual licence.

No	Situation.	Date of Establishment	Occupier	Subsequent Occupier
17	Suez Road	1877	J. Rose	Eastman's, Ltd.
18	50, Kingston Street ...	1878	T. Bidwell, junr. ...	G. Gilbert
19	37, Castle Street... ...	1879	W. Evans	
20	Covent Garden	1881	G. Sennitt	
21	Catharine Street... ...	1882	Mr. Radford ...	Swann & Sansom
22	Thoday Street	1880	T. Haslop	
23	Auckland Road	1893	G. Pryor	
24	Sturton Street	1898	Co-operative Society	
25	Newmarket Road ...	1904	J. Speechley	

As regards their sanitary condition the following are the points to which attention has been directed.

Under each head the slaughterhouses in the Borough are contrasted with the model of the Local Government Board, and the various items are considered in the order in which they are set out in the Board's Memorandum. The details of, and recommendations relating to, each slaughterhouse are given in the Appendix.

1. Position.—Slaughterhouses should not be within 100 feet of a dwelling-house, and the site should admit of two sides of the slaughterhouse being open to the external air. Only four in Cambridge are over 100 feet from the nearest dwelling house. The distances of the remainder from the nearest dwelling-house are :—

60 feet distant = 4
50 ,, ,, = 2
40 ,, ,, = 3
30 ,, ,, = 4
20 ,, ,, = 2
10 ,, ,, = 1
less than 10 feet = 3 (one of these immediately adjoins the house and is entered from the back shop).

2. Lairs.—Should not be within 100 feet of a dwelling-house. The lairs usually immediately adjoin and form part of the general structure ; in several the animals are kept in the slaughterhouse.

3. The slaughterhouse should not be below ground level. All comply with this requirement.

4. The approach should not be inclined more than 1 in 4, and should not be through any dwelling-house or shop. All comply with the first requirement ; one is entered directly from the shop, but has another door opening from the yard.

5. There should be no loft or room overhead. Two have lofts over the slaughterhouse.

6. Water supply.—Satisfactory in all but two in which the distance from the slaughterhouse is too great.

7. Ventilation.—In four it is insufficient.

8. Paving.—Should be asphalte, concrete or some other impervious material, laid with a proper slope and channel towards a gulley placed *outside* the slaughterhouse.

The materials for paving are :—Stone flags, 1 ; Concrete, 12 ; Brick, 7 ; partly Brick, partly Concrete, 3. Eleven are in a defective condition.

Eighteen have a drain inlet *within* the slaughterhouse.

9. The internal surface of the walls should be covered with smooth impervious material to a sufficient height.

Fifteen have the internal walls cemented to heights varying from 1½ to 5 feet. One has glazed brick walls. Five are not cemented at all and are either rough brick or wood. Two have portions of the walls cemented.

10. No W.C. should be within the slaughterhouse. All comply with this.

There should be no direct communication between the slaughterhouse and any stable or W.C. One has a horse stable ventilating directly into the slaughterhouse.

11. Every lair should be properly paved, drained and ventilated. Seven are either badly paved or unpaved, and eight have defective drainage or none. In twelve the ventilation is into the slaughterhouse. Three have no lairs.

In the Byelaws several other points are dealt with, viz., *Water Supply* (Byelaws 8 and 15). There shall be a sufficient supply of wholesome water for animals and for cleansing the slaughterhouse. The L.G.B. memorandum states "the slaughterhouse should be provided with an adequate tank, so placed that the bottom shall be not less than six feet above the level of the floor."

The majority have taps either inside or just outside the slaughterhouse, two are supplied by means of pumps conveniently situated, in two the supply (one a pump and the other a tap in the house kitchen) is 15 feet away, and in one it is 60 feet distant.

Lairs. Animals must be kept in pounds, stalls, pens or lairs. In several instances this Byelaw is not observed. Pigs were being kept in one slaughterhouse, and in six others the lair is a part of the slaughterhouse which has simply been boarded off.

Receptacles for refuse A sufficient number of non-absorbent receptacles, furnished with closely fitting covers, must be provided. Nine have galvanized iron receptacles, two being without covers, two have tubs, three use manure pits which are emptied when full, (refuse is required to be removed at least once in every 24 hours), nine are without any sort of receptacle.

Limewashing walls should be carried out every quarter. The floors and internal surface of the walls should be washed down within three hours after slaughtering. Seven were found in a dirty condition.

With regard to the conduct of their business, complaints are occasionally received from people living near the slaughterhouses, generally about their offensive condition, and in one instance the complaint arose from the noise going on during the slaughtering of pigs. In three or four there is not sufficient privacy during the process of slaughtering.

The question of meat inspection is so closely associated with that of slaughterhouses that it is necessary to say something upon it here.

It must be admitted at once that in Cambridge as in other towns where slaughtering is carried on only on private premises, the supervision of the meat supply is of necessity of a highly unsatisfactory character. Even if a special point were to be made by the Inspectors of inspecting as much of the meat as possible, the amount would be only trifling compared to the total, and it would be quite impossible to ensure that diseased meat was properly disposed of.

In some localities where members of the trade have formed a butchers' vigilance association for the purpose of preventing the sale of diseased meat, a certain amount of supervision can be exercised by the butchers themselves. But nothing of this sort exists in Cambridge, and the supervision possible for the Inspectors is of the most insignificant and uncertain character, and can by no means be relied upon to protect the public from the sale of meat which is diseased and unfit for food.

In answer to questions many of the butchers replied that a Veterinary Surgeon was never called in as they never got any diseased meat. Yet at one of the slaughterhouses the carcase of an animal just killed showed evidence of Inflammation of the Lungs. Others replied that any diseased meat they got was sent away with the offal.

Should my opinion of the position of some of the private slaughterhouses prove to be correct, I would suggest that the question of providing a Public Abattoir be considered along with the abolition of those private premises which are at present in illegal occupation. At any rate this seems to afford an excellent opportunity of going fully into the matter, and in any case it should be possible to effect a considerable improvement in the private slaughterhouses in the town.

My recommendations with regard to the existing premises are :

1. That the position of those premises which ought to be "licensed" as opposed to "registered" slaughterhouses be considered.
2. That, if considered necessary, the occupiers of such "licensed" premises be requested to make application for a licence.
3. That any licence granted should be for one year only.
4. That the occupiers of any slaughterhouses in need of repair and alteration be asked to carry them out, and to keep the premises in accordance with the byelaws.

I would further recommend that the question of a Public Abattoir be taken into consideration, and that when the granting of any new licenses comes up for consideration this should be kept in view. The views of the butchers on the question of a Public Abattoir might also be obtained.

It might also be advisable that the whole subject should be considered by the Committee and butchers' representatives. As a rule the trade is opposed to public slaughterhouses, but if considerable alterations have to be made in existing premises this would seem to be an opportune time to approach the question with them.

November, 1909.

ANDREW J. LAIRD.

APPENDIX.

REPORTS OF INSPECTORS.

I.

Situation: Rear of 13, Bene't Street. Registered.
Owner and Occupier: William Robinson, 13, Bene't Street.
Approach: By double gates from Bene't Street.
Nearest House: 100 feet.
Animals Killed per Week: Beasts 3 ; Sheep 10 ; Pigs 2.
Any other Animals kept: No.
Water Tap: Inside Slaughterhouse.
Paving: Concrete flooring, flags and bricks, sunk in places.
Drainage: Gulley inside slaughterhouse.
Cleanliness: Clean. Light very bad. Loft overhead.
Walls: Bricks cemented, 4 ft. high.
Refuse: Removed daily.
Lairs: Sheep pen ventilates directly into slaughterhouse.
Area: 238 sq. ft.

No other butcher kills here.

RECOMMENDATIONS.

Repair the floor.

Make the sheep pens so that they do not ventilate into the slaughterhouse.

Remove drain gulley to external position.

Abolish loft over slaughterhouse.

II.

Situation: Rear of 148, East Road. Registered.

Occupier: William Rogers, 32, New Square.

Owner: Charles Wells, 117, Fitzroy Street, Cambridge.

Approach: By double gates from East Road.

Nearest House: Adjoins No. 148, East Road.

Animals Killed per week: Beasts 1, Sheep 4, Pigs 2. This includes the meat for his shop at

Any other animals kept: Dog and horses; not allowed in slaughterhouse.

Water Tap: Inside slaughterhouse.

Paving: Common bricks, worn and defective.

Drainage: Stoneware gulley inside slaughterhouse.

Cleanliness: Walls and ceiling dirty.

Walls: Not cemented and not impervious.

Refuse: No proper receptacle.

Lairs: Pig lair, cement floor. Sheep and beast lairs, floors unpaved. All undrained. Roof without gutters or spouting. Beast lair dark and badly ventilated.

Yard: Unpaved.

Area: 140 sq. ft.

No other butcher uses this slaughterhouse.

RECOMMENDATIONS.

That screen be provided to keep place private.

New concrete floor be provided.

Walls to be cemented up to a height of 5 feet and cleansed.

Proper galvanised receptacle to be provided for refuse.

Lairs and yard to be paved and drained; roof provided with eaves, gutters and down spouts. Beast lair to be efficiently lighted and ventilated.

emove drain gulley to external position.

III.

Situation: Back of New Square. Not at present in use, and particulars could not be obtained.

IV.

Situation: Rear of 37, Bridge Street. Registered.
Owner: St. John's College.
Occupier: George Jackson Dring & Co., 37, Bridge Street.
Approach: By carriage way from Bridge Street.
Nearest House: 20 feet distant.
Animals killed per week: Beast 1, Sheep 6, Pigs 4.
Boiler: inside Slaughterhouse.
Any other animals kept: No.
Water tap: In kitchen, 15 feet from slaughterhouse.
Paving: Concrete floors in good condition.
Drainage: Gulley inside slaughterhouse.
Cleanliness: Walls dirty. Lighting very bad. Ventilation—fair.
Walls: Partly of brick and partly wood. Cemented to a height of 4 feet.
Refuse: Tub in slaughterhouse; removed daily.
Lairs: Paved, concrete in good condition. Ventilate directly into slaughterhouse—separated by partial wooden partition
Area: 177 square feet.

No other butcher kills here.

RECOMMENDATIONS.

Provide pens and lairs entirely separate from slaughterhouse.

Provide more light and ventilation so that door can be shut and place kept private.

Provide a water tap for slaughterhouse.

Cleanse interior of slaughterhouse and lairs.

Remove drain gulley to external position.

V.

Situation: Rear of 117, Fitzroy Street. Registered.

Owner and Occupier: Charles Wells, 117, Fitzroy Street.

Approach: By double gates from Fitzroy Back Lane.

Nearest House: 40 feet.

Animals Killed per week: Beast 1, Sheep 4, Pigs 1.

Boiler: inside slaughterhouse.

Any other Animals kept: No.

Water Tap: Inside slaughterhouse.

Paving: Concrete floor.

Drainage: Gulley inside slaughterhouse.

Cleanliness: Clean. Light deficient.

Walls: Cemented to a height of 4 ft. 6 in.

Refuse: Removed daily. Tin pails used.

Lairs: None on premises. Animals brought up when required. Kept in part partitioned off.

Area: 144 square feet.

No other butcher kills here.

RECOMMENDATIONS.

Provide more light and ventilation in place of iron grating door in Fitzroy Back Lane.

Provide lairs and pens separate from slaughterhouse.

Remove drain gulley to external position.

VI.

Situation : Rear of 14, Fitzroy Street. Registered. No notice over door.

Owner and Occupier : Walter Hawkes, 14, Fitzroy Street.

Approach : By double gates from Burleigh Place.

Nearest House : 6 feet 6 inches from slaughterhouse.

Animals killed per week : Pigs, 4. Animals not stunned.

Any other animals kept : No.

Water tap : Inside slaughterhouse. Hot water obtained from steam engine boiler which drives chopper and sausage machine in slaughterhouse.

Paving : Concrete floor slightly defective.

Drainage : Glazed earthenware gulley inside slaughterhouse.

Cleanliness : Cooling room walls, ceiling and floor dirty. Steam engine boiler, coal fired, inside slaughterhouse.

Walls : Bricks whitewashed. Not cemented up to 5 feet.

Refuse : Removed daily. No receptacle.

Lairs : Accommodation for 10 pigs, not separate from but ventilating directly into slaughterhouse, and dirty.

Area : 240 square feet.

No other butchers kill here.

RECOMMENDATIONS

Animals to be stunned before being bled.

Doors to be kept closed.

Floors to be repaired.

Cooling room to be cleansed.

Walls to be cemented to a height of 5 feet.

Galvanised Iron covered receptacle for manure to be provided.

Lairs to be distinctly separated from slaughterhouse, thoroughly cleansed, lighted and ventilated.

Notice "Registered Slaughterhouse" to be posted and kept legible.

Remove drain gulley to external position.

VII.

Situation : In yard Cambridge Place. Registered. No notice over door.

Owner : Mr. S. Ricketts, Chesterton Road.

Occupier : Mr. A. R. Nichols, Petty Cury.

Approach : By gates from Cambridge Place.

Nearest House : Abuts on houses in Glisson Road.

Animals Killed per week : Beasts 5, Sheep 20, Calf 1, Lambs in season 10 to 15.

Water Tap : Inside slaughterhouse.

Paving : Cement floor.

Drainage : Opening to drain within slaughterhouse.

Boiler : Inside slaughterhouse.

Cleanliness : In fair condition.

Walls : Partly constructed of wood, cemented about 18in. high

Refuse : Hides, etc., removed every day : galvanised receptacle provided.

Lairs : Animals fetched from field as required.

Manure Receptacle : Not provided

Area : 142 square feet.

RECOMMENDATIONS.

Notice : "Registered Slaughterhouse" to be posted and kept legible.

All walls within slaughterhouse to be coated with impervious material to a height not less that 5 feet.

Remove opening to drain within slaughterhouse to an external position.

Provide manure receptacle constructed in accordance with the Byelaws.

VIII.

Situation : Tan Yard, Cambridge. Registered.
Occupiers : Warrington & Sons, Magdalene Street.
Owners : Storey's Charity.
Approach : By carriage way from Northampton Street.
Nearest House : 150 feet.
Animals Killed per week : Beasts 3 to 5, Sheep 15, Pigs 5.
Any other animals kept : No.
Water Tap : Now just outside door. Pump in yard 15 feet from slaughterhouse.
Boiler : Outside slaughterhouse.
Paving : Part floor concrete in good order. Part bricks defective.
Drainage : Gulley inside slaughterhouse.
Cleanliness : Clean.
Walls : Cemented 4 feet high.
Refuse : Removed daily to farm. Tub receptacle.
Lairs : Unpaved and undrained.
Yard : Partly paved with Bricks.
Area : 576 square feet.

RECOMMENDATIONS.

Repair floor of slaughterhouse where necessary.
Pave lairs with a hard smooth impervious material.
Pave yard round slaughterhouse.
Remove drain gulley to external position.

IX.

Situation : Express Yard, King Street. Registered. No notice over door.

Occupier : Trustees of the late A. E. Goodliffe, B. and S. Goodliffe, 26, Sidney Street.

Owner : Ditto.

Approach : By common passage 12 feet wide from King Street.

Nearest House : 200 feet.

Animals Killed per week : Beasts 5, sheep 16, pigs 4.

Any other animals kept : No.

Water Tap : Inside slaughterhouse.

Paving : Concrete floor, good condition.

Drainage : Glazed stoneware gulley inside slaughterhouse.

Cleanliness : Walls and ceiling dirty. Ventilation and light very bad.

Walls : Wooden and not cemented.

Refuse : Pit, cemented inside, abuts on slaughterhouse; emptied when full ; foul condition.

Lairs : Very dark and dirty, and ventilating directly into slaughterhouse.

Area : 553 square feet.

Hay loft over slaughterhouse.

No other butcher kills here.

RECOMMENDATIONS.

Provide for greater privacy.

Whitewash the whole of the walls and ceilings.

Cement walls to height of 5 feet.

Remove refuse daily.

Provide adequate light and ventilation.

Remove pens and lairs from inside slaughterhouse.

Remove loft from over slaughterhouse.

Pave yard round slaughterhouse.

Notice "Registered Slaughterhouse" to be posted and kept legible.

Remove drain gulley to external position.

X.

Situation : Rear of 28, Fitzroy Street. Registered.

Occupier : Charles Custerson, 28, Fitzroy Street.

Owner : Charles Redfarn, 48, George Street, Chesterton, Cambs.

Approach : By double gates from Eden Place.

Nearest House : 40 feet.

Animals Killed per week : Beasts 1, Sheep 8, Pigs 1, Calves occasionally killed.

Any other Animals kept : One dog, not allowed in slaughterhouse.

Water Tap : Inside slaughterhouse.

Paving : Stable bricks. Lairs, brick in good order.

Drainage : Stoneware gulley inside slaughterhouse. Drainage from sheep lairs runs through slaughterhouse.

Cleanliness : Clean. Light poor.

Walls : Cemented 5 feet high.

Refuse : Galvanised covered receptacle, removed daily.

Lairs : For Sheep and Pigs adjoined slaughterhouse. For Beasts in Eden Place, Beast Lair dirty at time of inspection.

Area : 226 square feet.

One other butcher using slaughterhouse, Alfred Harben, 54, Norfolk Street.

RECOMMENDATIONS.

Stable brick paving is unsatisfactory and should be made smooth with cement.

Drainage from sheep lairs to be diverted so as not to run through slaughterhouse.

Lairs to be kept thoroughly clean and whitewashed occasionally.

Remove drain gulley to external position.

XI.

Situation : Rear of 190, East Road. Registered.

Owner and Occupier : Prime T. Coulson, 190, East Road.

Approach : By double gates from East Road.

Nearest House : 60 feet.

Animals Killed per week : Beasts 3 ; Sheep 6 ; Pigs 10 to 15.

Water Supply : Pump inside slaughterhouse.

Paving : Stone flags in defective condition.

Drainage : Stoneware gulley inside slaughterhouse.

Boiler : Inside slaughterhouse.

Cleanliness : Clean. Light and Ventilation fair.

Walls : Cemented to a height of 5 feet.

Refuse : Pit, cemented inside, 15 yards from slaughterhouse. Very foul, emptied when full.

Lairs : 2 pig pens in slaughterhouse. Pigs and Beasts lairs badly paved and drained. Beasts lair ventilates directly into slaughterhouse.

Yard : Paved with cobbles, defective in places.

Drains : Appear defective.

Area : 140 square feet.

RECOMMENDATIONS.

Paving to be repaired.

Drains to be put in good condition.

Refuse to be removed daily.

Pig pens to be removed from inside slaughterhouse, and all pens and lairs to be properly paved and drained.

Yard to be paved with a hard smooth impervious material.

Remove drain gulley to external position.

Disconnect beast lair completely from slaughterhouse.

XII.

Situation : At rear of 122, Newmarket Road. Registered.

Owner and Occupier : Mr. J. Traylen, 122, Newmarket Road.

Approach : By gateway from Newmarket Road.

Nearest House : 50 feet.

Animals Killed per week : Beasts 4, Sheep 20, Pigs 4 or 5.

Water Tap : Outside slaughterhouse.

Paving : Concrete floor.

Drainage : Opening to drain in slaughterhouse.

Cleanliness : Clean. Ventilation and light fair.

Walls : Portion of walls not cemented.

Refuse : Galvanised iron receptacle not provided. Hides, etc., removed two or three times a week.

Lairs : In large yard, not attached to slaughterhouse.

Area : 448 square feet.

RECOMMENDATIONS.

Coat all walls within slaughterhouse with an impervious material to a height of 5 ft.

Remove trap to drain within slaughterhouse to an external position.

Provide a galvanised iron receptacle.

XIII.

Situation : At the rear of 15, Gwydir Street. Registered.

Occupier : Mr. J. Redfarn, 15, Gwydir Street.

Owner : Mrs. G. Palmer, Grange Road.

Approach : By gateway from Gwydir Street.

Nearest House : Between 40 and 50 feet.

Animals Killed per week : Beasts 2 or 3 ; Sheep 12 to 15 ; Pigs 4 or 5.

Any other Animals kept : Dog, in yard.

Water Tap : Inside slaughterhouse.

Paving : Blue Staffordshire bricks.

Drainage : Opening within slaughterhouse.

Boiler : Inside slaughterhouse.

Cleanliness : In fair condition. Light and ventilation very fair.

Walls : Cemented to a height of 5 feet.

Refuse : Galvanised receptacle provided, removed every day.

Lairs : Not provided with proper floors nor drained. Sheep pens attached to slaughterhouse ; loft over which has an opening into slaughterhouse.

Manure Receptacle : Not in accordance with the byelaws ; brick work dilapidated. No cover provided.

Area : 165 square feet.

RECOMMENDATIONS.

To provide suitable floors and drains to lairs.

Remove drain opening from slaughterhouse to an external position.

Construct Manure receptacle in accordance with the byelaws.

XIV.

Situation : Rear of 53, Norwich Street. Not at present in use, and particulars could not be obtained.

XV.

Situation : At rear of 64, Hills Road. Registered.

Owner and Occupier : W. Adkins, 64, Hills road.

Approach : By gates from Hills Road.

Nearest House : 50 feet.

Animals Killed per week : Beasts 5, Sheep 20, Pigs 2 or 3 in season.

Any other Animals kept : No.

Water Tap : Inside slaughterhouse.

Paving : Cement with channel leading to gulley.

Drainage : Gulley trap within slaughterhouse.

Boiler : Inside slaughterhouse.

Cleanliness : In fair condition.

Walls : Coated with impervious material to a height of 18 inches.

Refuse : Galvanised receptacle without cover. Hides, etc., removed 3 times per week.

Lairs : Opening to but shut off from slaughterhouse. Floors concrete and pebble.

Manure Receptacle : Cover not provided, walls not coated with impervious material.

Area : 185 square feet.

RECOMMENDATIONS.

Remove gulley trap within slaughterhouse to an external position.

Coat walls with an impervious material to a height of 5 feet.

Provide cover to galvanised receptacle.

Properly construct manure receptacle.

XVI.

Situation: At rear of 67, Gwydir Street. Registered.

Owner: Mr. J. Cross, 23, Hills Road.

Occupier: Mr. A. W. Goode, Fulbourn, Cambs.

Approach: By gateway from Gwydir Street.

Nearest House: 30 feet.

Animals Killed per week: Beast 4 or 5; sheep 15; pigs 3 or 4.

Any other Animals kept: Dog kept in yard.

Water Tap: Just outside slaughterhouse.

Paving: Cement floor.

Drainage: Gulley trap within slaughterhouse.

Boiler: Outside slaughterhouse.

Cleanliness: Fair.

Walls: Cemented.

Refuse: Removed every morning. No galvanised receptacle provided.

Lairs: Floors in bad condition and undrained. Ventilate into slaughterhouse. Considerable quantity of manure in lairs.

Manure Receptacle: Not covered or drained.

Area: 176 square feet.

Mr. Cross also slaughters here.

RECOMMENDATIONS.

Remove drain from within slaughterhouse to an external position.

Provide a galvanised receptacle.

Relay paving in lairs and provide drainage to same.

Lairs to be distinctly separated from slaughterhouse.

Manure receptacle to be constructed in accordance with the byelaws.

Drain to be provided to stable.

Relay paving in yard near slaughterhouse.

XVII.

Situation; In yard, Suez Road. Registered.

Owner : Mr. Rose, King Street.

Occupier : Eastman's Ltd.

Approach : By gateway from Suez Road.

Nearest House : 20 or 30 feet.

Animals Killed per week : Pigs 15 ; Calf 1.

Water Tap : Inside slaughterhouse.

Paving : Cement. Out of repair.

Drainage : Gulley inside slaughterhouse.

Boiler : Inside slaughterhouse.

Cleanliness : Clean.

Walls : Coated with impervious material.

Refuse : Hide, etc., removed once per week. Galvanised receptacle provided for refuse, but the manure receptacle seems to be more particularly used for this purpose.

Lairs : Adjoining slaughterhouse, but totally shut off.

Area : 212 square feet.

RECOMMENDATIONS.

Repair floor of slaughterhouse.

Remove trap to drain within slaughterhouse to an external position.

Discontinue using manure receptacle for refuse arising from slaughtering.

XVIII.

Situation : At rear of 50, Kingston Street.

Owner and Occupier : Mr. C. G. Gilbert, 50, Kingston Street.

Approach : By gates from Kingston Street.

Nearest House : 30 feet.

Animals Killed per week : Beast 1 ; Sheep 4 or 5 ; Pigs 2.

Any other Animals kept : No.

Water Supply : Pump in slaughterhouse.

Paving : Blue Staffordshire bricks, could be improved.

Drainage : Recently reconstructed under the supervision of the Borough Surveyor's Department.

Boiler : Inside slaughterhouse.

Cleanliness : Clean.

Walls : Coated to a height of 5 feet with impervious material.

Refuse : Hides, etc., removed twice per week. No galvanised receptacle provided.

Lairs : Partitioned off from but ventilate into slaughterhouse.

Area : 192 square feet.

RECOMMENDATIONS.

Repair floor of slaughterhouse where necessary.

Provide galvanised receptacle for refuse.

Make lairs so that they do not ventilate into the slaughterhouse.

XIX.

Situation : At rear of 37, Castle Street (an old stable with manger, &c., still in).

Occupier : William Evans, 37, Castle Street.

Owners : St. John's College.

Approach : By double gates from Shelley Row.

Nearest House : 60 feet.

Animals Killed per week : 5 or 6 Pigs.

Any other Animals kept : Dog, not allowed in slaughterhouse.

Water Tap : 60 feet from slaughterhouse.

Paving : Brick floated with cement—defective. Yard unpaved.

Drainage : Untrapped drain inlet in slaughterhouse.

Boiler : Inside slaughterhouse.

Cleanliness : Walls and ceiling dirty.

Walls : Bricks, whitewashed, not cemented, broken.

Refuse : No proper receptacle.

Lairs : Concrete floor, undrained, open wooden walls.

Area : 277 square feet.

No other butcher kills here.

RECOMMENDATIONS.

Provide a water tap to slaughterhouse.

Repair floor of slaughterhouse.

Pave yard round slaughterhouse.

Amend drains and put them in good order, and remove gulley to an external position.

Cleanse walls and ceiling.

Cement walls to a height of 5 feet.

Provide a suitable refuse receptacle, and remove refuse daily.

Drain pig pens.

XX.

Situation : In Yard, Covent Garden.

Owner and Occupier : Mrs. Sennitt, 7, Peas Hill.

Approach : By gateway from Covent Garden.

Nearest House : 10 or 15 feet.

Animals Killed per week : Beasts 3, Sheep and Pigs 15,

Any other Animals kept : No.

Water Tap : Outside slaughterhouse.

Paving : Part by Blue Staffordshire and part by ordinary building bricks.

Drainage : Opening to drain within slaughterhouse.

Cleanliness ; Clean.

Boiler : Within slaughterhouse.

Walls : Coated only where the slaughtering is done.

Refuse : Hides, etc., removed 2 or 3 times a week, galvanised receptacle not provided.

Lairs : For pigs connected directly with slaughterhouse, brick floors, opening to drain inside.

Area : 340 square feet.

RECOMMENDATIONS.

Coat all walls within slaughterhouse with impervious material to a height of 5 feet.

Remove trap to drain within slaughterhouse to an external position.

Provide galvanised receptacle for refuse.

Lairs : To be distinctly separated from slaughterhouse, and trap to drain to be removed to an external position.

Paving in yard to be attended to.

XXI.

Situation : Yard, Catharine Street.

Owners and Occupiers : Messrs. Swann & Sansom.

Approach : By gates from Catharine Street.

Nearest House : About 30 feet.

Animals killed per week : Beasts 3 ; Sheep and Pigs 20.

Any other Animals kept : No.

Water Tap : Inside slaughterhouse.

Paving : Bricks, out of repair.

Drainage : Opening to drain within slaughterhouse.

Boiler : Inside slaughterhouse.

Cleanliness : Fair. Loft over slaughterhouse.

Walls : Cemented.

Refuse : Hides, etc., removed every day. Galvanised receptacle with cover provided.

Lairs : Not paved or drained, partitioned from slaughterhouse with "Railway Sleepers," about 7 ft. 6 in. high leaving an opening of several feet open to slaughterhouse.

Manure Receptacle : Not covered.

Area : 187 square feet.

Mr. P. W. Hall, Cherryhinton Road, and Messrs. Haylett & Bell, Catharine Street, also slaughter here.

RECOMMENDATIONS.

Brick floor inside slaughterhouse requires attention.

Trap to drain within slaughterhouse to be removed to an external position.

Lairs to be paved and drained, and to be entirely shut off from slaughterhouse.

Manure receptacle to be constructed in accordance with the byelaws.

Abolish loft over slaughterhouse.

XXII.

Situation : In Yard, Thoday Street.

Owners and Occupiers : Messrs. Haslop & Co., Silver Street.

Approach : By gateway from Thoday Street.

Nearest House : 30 or 40 feet.

Animals Killed per week : Beasts 2 or 3, Sheep 10 to 15.

Water Tap : In yard.

Paving : Blue Fluted Staffordshire Bricks.

Drainage : To gulley trap outside slaughterhouse.

Cleanliness : Good.

Walls : Wood, cemented 4 or 5 feet in height all round.

Refuse : Hides, etc., removed 3 or 4 times per week. Galvanised receptacle provided.

Lairs : Two attached to slaughterhouse, one partly open to it.

Area : 187 square feet.

RECOMMENDATION.

Lairs to be entirely shut off from slaughterhouse.

XXIII.

Situation : Auckland Road.

Owner : Thomas Askham, Newmarket Road.

Occupier : John Pryor, Burleigh Street.

Nearest House : 100 feet distant.

Animals Killed per week : Pigs 8.

Any other Animals kept : Horse kept in stable which connects directly with slaughterhouse.

Water Tap : Inside slaughterhouse.

Paving : Floor concrete, dirty.

Drainage : Gulley outside slaughterhouse.

Cleanliness : Premises dirty, an old cowshed.

Walls : Wooden, dirty, not cemented, dilapidated.

Refuse : Pit 3 yards from slaughterhouse, not cemented inside, emptied when full. Wooden tubs used.

Lairs : 4 pig lairs and stable, brick paved, under same roof as slaughterhouse and ventilating into it. Dark.

Yard : Unpaved.

Area : 248 square feet.

RECOMMENDATIONS.

Provide impervious walls to a height of 5 feet, and whitewash the whole of the interior. Repair roof.

Remove pens, lairs, and stable from interior of slaughterhouse.

Repair paving in pens and stable, and pave yard round slaughterhouse.

Construct a receptacle for manure in accordance with bye-laws.

Remove refuse daily and provide a proper receptacle.

Provide more light in slaughterhouse and pens.

XXIV.

Situation : In yard, Sturton Street.

Owners and Occupiers : Co-operative Society, Ltd., Burleigh Street.

Approach : By gateway in Sturton Street.

Nearest House : About 60 feet.

Animals Killed per week : Beasts 6 or 7; Sheep 18 ; Pigs 10.

Water Tap : Inside slaughterhouse.

Paving: Cement, fluted, with channels leading to drains outside.

Drainage : All outside slaughterhouse.

Boiler : Inside slaughterhouse.

Cleanliness : Clean.

Walls : Glazed bricks.

Refuse : Hides, etc., removed 3 times a week. Galvanised receptacle without cover provided.

Lairs : Partitioned off from slaughterhouse.

Area : 403 square feet.

RECOMMENDATION.

Provide a galvanised receptacle with cover.

XXV.

Situation : At rear of house next 349, Newmarket Road.
Owner & Occupier : Mr. J. Speechley, Newmarket Road.
Approach : By roadway from Newmarket Road.
Nearest House : 60 or 70 feet.
Animals Killed per week : Beasts 2, Sheep 5, Pigs 2.
Any other Animals kept : Dogs kept in yard.
Water Tap : Inside slaughterhouse.
Paving : Fluted concrete,
Drainage : To gulley trap outside slaughterhouse.
Boiler : Inside slaughterhouse.
Cleanliness : Dirty.
Walls : Cemented.
Refuse : Hides, etc., removed every day. Galvanised receptacle not provided.
Area : 269 square feet.

RECOMMENDATIONS.

To provide a galvanised receptacle with cover for refuse.

Thoroughly cleanse premises.